

Public Utilities

Volume 66 No. 4



August 18, 1960

CANADA'S REGULATORY PROFILE

By the Honorable E. C. Manning

« »

Good Public Relations Program Counters Public Apathy

By Harry T. Pritchard

« »

The Outage That Was a Blockbuster

By James H. Collins

« »

Political Platforms—1960





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Public Utilities

VOLUME 66

AUGUST 18, 1960

NUMBER 4



ARTICLES

- Canada's Regulatory Profile . . . Hon. E. C. Manning 217

A descriptive article about the program and outlook for gas regulation and oil and gas conservation policies in the Dominion and in the Province of Alberta.

- ## **Good Public Relations Program Counters Public Apathy** *Harry T. Pritchard* 228

some down-to-earth advice on the real task of focusing the company's image towards a more accurate reflection by a positive and energetic public relations program.

- ## The Outage That Was a Blockbuster

An entertaining "post-mortem" analysis of what happened in New York last summer.

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Pages with the Editors

THE Dominion of Canada, well-known for its loyalty to the Crown and Commonwealth, has sometimes been called "more British than Britain." But, then, political commentators have said the same thing of northern Ireland, New Zealand, and other Commonwealth countries which are proud of their allegiance and devotion to Her Majesty's government. Yet when we get down to the matter of practical forms of governmental operation, our good neighbor to the north has found it desirable to follow a number of patterns and procedures which have been used and are being used in the United States.

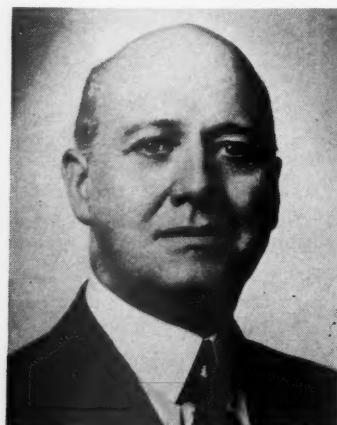
IT takes a little probing beneath the surface to discover these parallels. Ostensibly, for example, the Canadian provinces, as well as the Dominion government, follow the parliamentary form of democracy used in Great Britain, with its Premiers or Prime Ministers, instead of governors or other titular heads elected to administrative posts.

BUT in the area of regulation of public utilities, our Canadian friends have found that the system of independent regulatory commissions, long favored at

both the state and federal levels in the United States, is a workable machinery for the control of public service enterprises. Indeed, the difference, if any, is chiefly a matter of timing. In Canada regulation of public utility services such as natural gas is still relatively new and is even resisted to some extent. The same thing has happened in the United States and we still see a similar attitude in the area of natural gas producers in the Southwest.

LAST year the National Energy Board was established by the Canadian government following a very careful study and report by a Royal Commission. The opening article in this issue comes to us from the Premier of Alberta, the HONORABLE E. C. MANNING, who tells us about the program and outlook for gas regulation and oil and gas conservation in the Dominion and in the Province of Alberta. This description is in essence a restatement in article form of a discussion on the same subject delivered last spring before the Great Lakes regional meeting of the National Association of Railroad and Utilities Commissioners at White Sulphur Springs, West Virginia.

PREMIER MANNING, according to *Time* magazine, heads what might be called "the nearest approach to a theocracy in the Western Hemisphere." He leads the Social Credit party and has been associated with this group since its inception in 1934 by the well-known evangelist, Aberhart. Although originally regarded as somewhat radical in its monetary theories, the Alberta party is now considered relatively conservative and much of the shift in emphasis is believed due to the influence of the popular MR. MANNING and his management of the Alberta oil boom.



HARRY T. PRITCHARD

BORN on a Saskatchewan farm in 1908.

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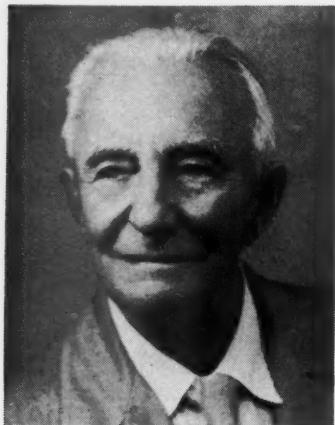
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FACTORIES AT

PAGES WITH THE EDITORS (*Continued*)



JAMES H. COLLINS

He attended the Prophetic Bible Institute from 1927 to 1929, after hearing a broadcast by Mr. Aberhart. He later became Aberhart's secretary and manager of the institute. He was first elected to the Alberta assembly in 1935 and appointed to the Cabinet as provincial secretary—one of the youngest Cabinet Ministers in the history of British Parliaments. The success of his oil resource profits policy was followed by a landslide victory in 1948. PREMIER MANNING is still a lay preacher in the Baptist church and remains the director of the Prophetic Bible Conference. He makes his home in Edmonton.

* * * *

HARRY T. PRITCHARD, whose article on practical aspects of a good public relations program for a public utility company begins on page 228, is a well-known veteran public utility executive whose career has been identified with the Indianapolis Power & Light Company. Born in New Britain, Connecticut, he attended Adelphi Academy in Brooklyn, New York, and graduated from Yale ('08, PhB). He started his public utility career as a dynamo tender and oiler at the Lockport hydroelectric plant of the Sanitary District of Chicago and worked up to the post of superintendent of construction where he continued until 1916. After some experience operating small utilities in which he acquired an interest, he became general superintendent of the Indiana Power Company in 1919 and, as a result of progressive reorganizations, be-

came vice president of Indianapolis Power & Light Company in 1927. He became president in 1934 and retired in 1957 but continues as chairman of the board.

* * * *

IT was a little more than a year ago that a half-million New Yorkers in the central part of the island of Manhattan found themselves blacked out during an electric power outage. For a while the cause seemed to be something of a mystery. Coming in the midst of a prolonged heat wave, some blamed the unusual load created by air conditioners. There was some comment in the press about cables until investigation showed that the area had more cable capacity than needed.

JAMES H. COLLINS, a long-time writer of human interest stories about business company operations, was intrigued by the explanations and counterexplanations. And so from his home in Washington, D. C., he did a little personal investigating. The result is the article on page 234, which takes the form of an entertaining "post-mortem" analysis of what happened in New York city last summer. And there are some conclusions to be drawn of interest to public relations departments of other utility companies.

OUTAGES in utility service, however rare, serve to remind us that such service is something like proofreading. When it is best done it is the least noticed. Although increasingly uncommon in city areas where underground pipe and conduits are virtually safe from the elements, the flight of much of the American population to the suburbs has made quite a few people reacquainted with the occasional flicker of lights caused by severe summer storms. As long as wires are on poles, and that will be a long time, we have to expect that lightning will strike them and trees will break them occasionally.

THE next number of this magazine will be out September 1st.

The Editors

Pow-
came
7 but

"Workshop-on-Wheels"

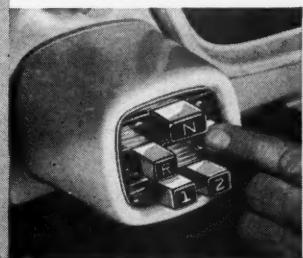
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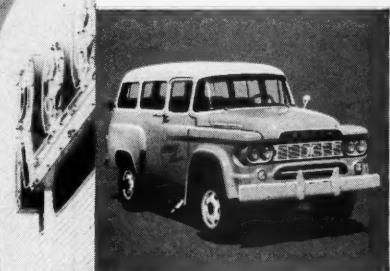
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(SEPTEMBER 1, 1960, ISSUE)

CAN REGULATORS BE JUDGES?

Over a year ago Commissioner Louis J. Hector resigned from the Civil Aeronautics Board amid a flurry of controversy. Unlike other recent regulatory resignations, Commissioner Hector had not been involved in any controversy over the merits of his own performance or conduct in office. On the contrary it was Commissioner Hector who fired up some new topics of controversy with an extended memorandum of explanation to President Eisenhower, discussing the shortcomings of commission regulation in general and the CAB in particular. Hector's objections were not to regulation per se, but to the traditional organization of the commissions and their staffs at the federal level. He felt that the responsibilities might be better turned over to administrative officials in some respects, and to a specialized tribunal in other respects. Since returning to his practice in Miami, Florida, Mr. Hector has had some additional thoughts about this subject and he gives us the benefit of his present thinking in this article. Many will not agree, of course. But he raises a number of arguments well worth consideration.

LIBERAL LINE EXTENSION POLICIES CAN BE PROFITABLE

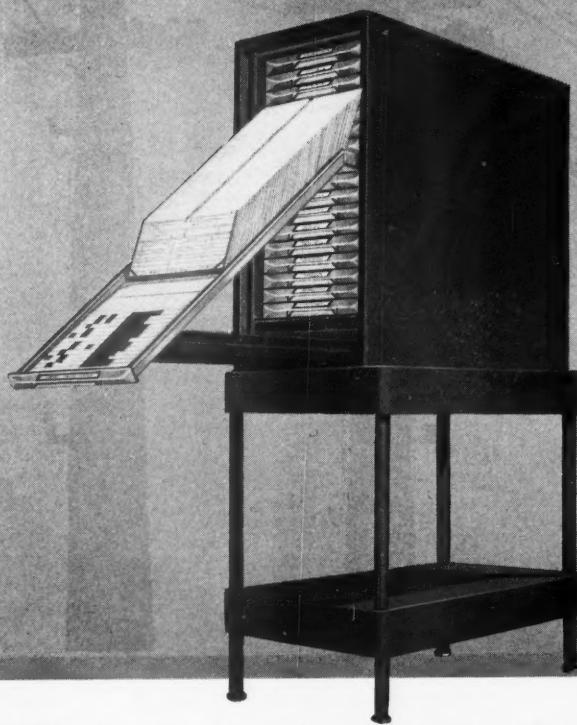
This is a case study of the economics of line extensions experienced by one electric utility company which will surely be of interest to others, and to those in regulation. It is the joint production of two officials of the California Electric Power Company, Vice President G. C. Delvaille and Assistant Rate Engineer Arthur D. Baldwin. While the figures are necessarily specialized in their applications, they do suggest a comparative pattern for constructing similar gauges elsewhere. The authors conclude that a low return on "lean" electric line extensions to new customers need not depress the total system return.

NUCLEAR ENERGY'S GROWING PAINS

John E. Gray is president of Nuclear Utility Services, Inc., of Washington, D. C. He was formerly associated with General Electric and Westinghouse, and has served as AEC's technical and manufacturing director at the Savannah river (H-bomb) plant. He has also been connected with the Shippingport project of the Duquesne Light Company. With such a background, his observations on progress in the nuclear power field will be read with profit and interest. He tells of the operating know-how and technical competence which have been obtained and the problems which lie ahead. He touches on such matters as the economic life of equipment, disposal of radioactive wastes, safety standards, plant economics, and other essential factors for consideration.

AND IN ADDITION . . . Special financial news, digests, and interpretations of court and commission decisions, general news happenings, reviews, Washington gossip, and other features of interest to public utility regulators, companies, executives, financial experts, employees, investors, and others.

POLE CONTROL!



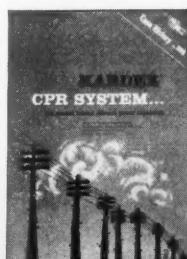
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President, Opinion Research Corporation.

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LORD LAMBTON, M. P.
*Special correspondent,
London Press.*

"On arrival (in Liberia) I tried to make my arrangements by telephone, but here I found myself in sympathy with the immensely popular President Tubman, who had just announced that so bad was the service that none of its employees would be paid until it improved."

N. E. TANNER
President, Canadian Gas Association.

"Private ownership and individual initiative built this country (Canada)—it also built the gas industry as we know it today. The magic hand of government does not guarantee greater efficiency. On the contrary, it is my experience that those in government administration are considerably less concerned with costs than are those in private industry."

JOHN P. SAYLOR
U.S. Representative from Pennsylvania.

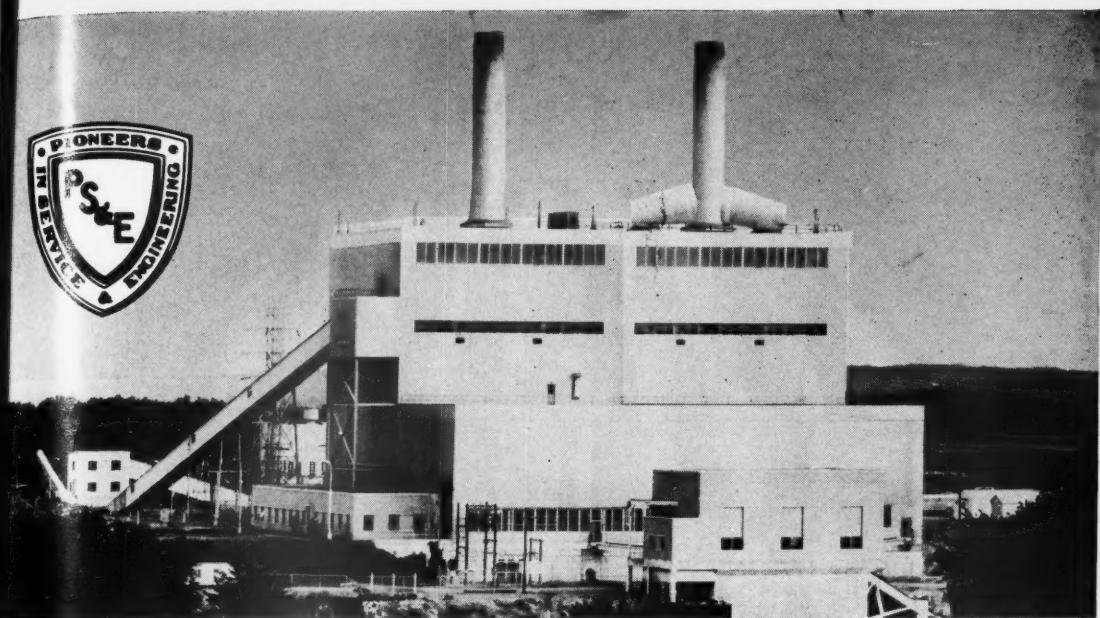
"Although the original concept of REA may have been a worth-while objective the co-ops' national association has injected them into political questions that have nothing to do with bringing electric power to farmers not receiving central station service. The National Rural Electric Co-operative Association by its actions has made it clear to anyone following its activities that bringing electric power to farmers is of secondary importance to it."

WILLIAM HENRY CHAMBERLIN
Author.

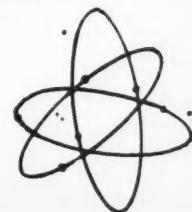
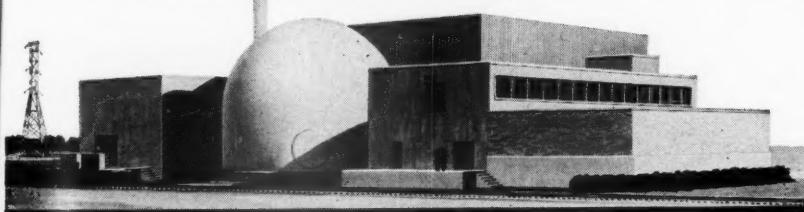
"Apart from the threat of military attack, which is a question in itself, the only thing we need fear from the Soviet economic pattern is that we should imitate or adopt it, even in part. Only if and as we maintain in our own lives the historic American principles of individualist opportunity in economics and other fields shall we worthily fill our historic destiny as champions of the principle that the state should be the servant of its citizens, not the master of its subjects."

ROBERT T. PATTERSON
Economist, American Institute for Economic Research.

"What can a person do? If he weights his financial arrangements to hold his own against inflation, deflation can cause him serious loss. If he protects his assets against deflation, inflation can destroy their value. The best a person can do, it seems, is straddle the fence—be ready for either, and hope not to lose too severely. The wise policy, if an individual's circumstances permit, is to divide what he has between equities that may rise in price with further inflation and conservative fixed-value assets that will retain their worth during a deflation."



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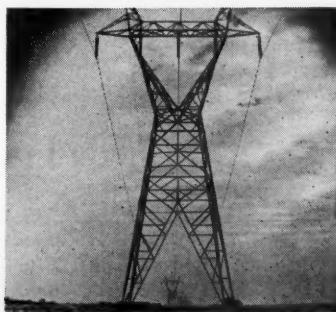
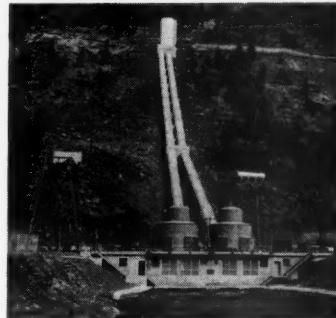
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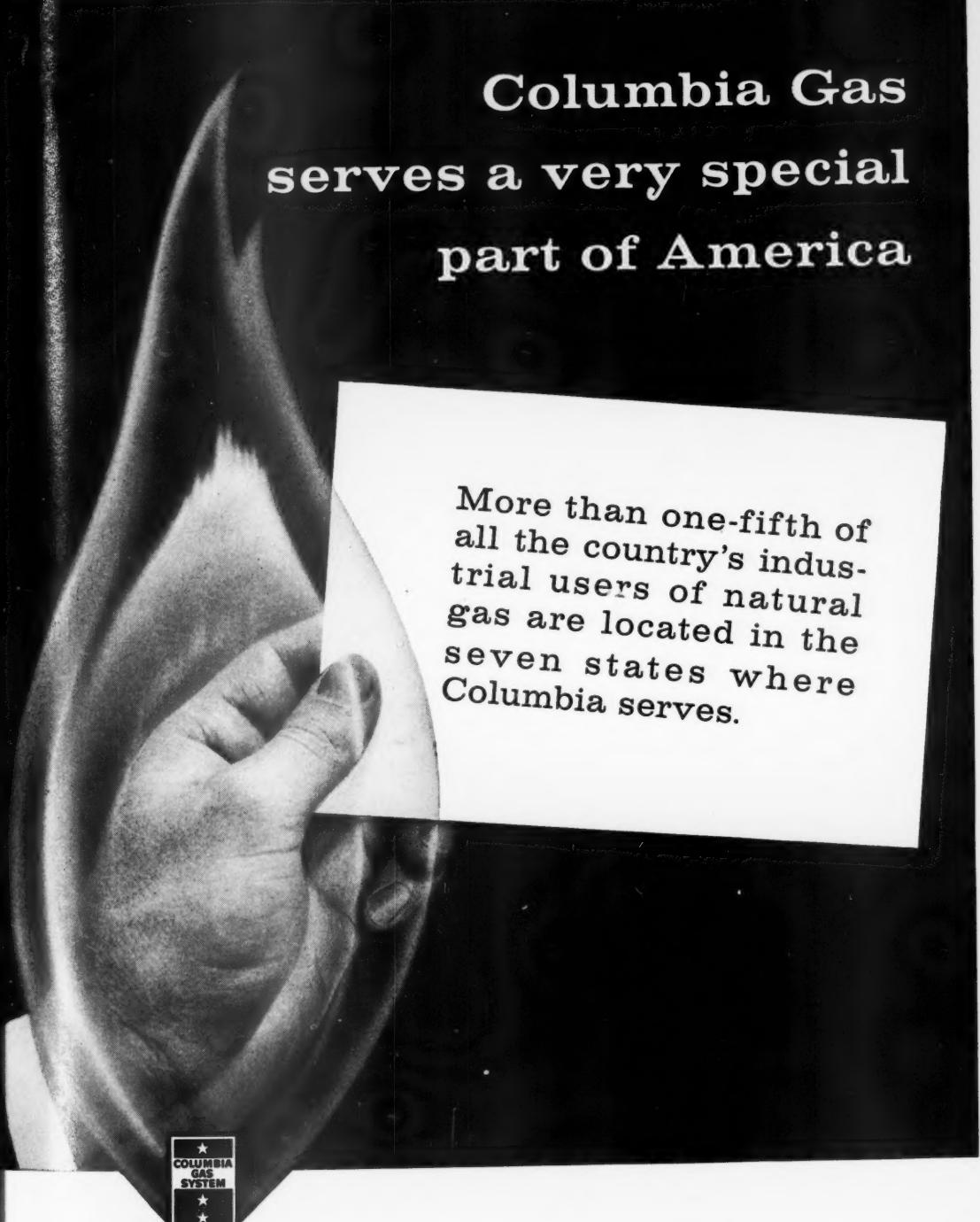
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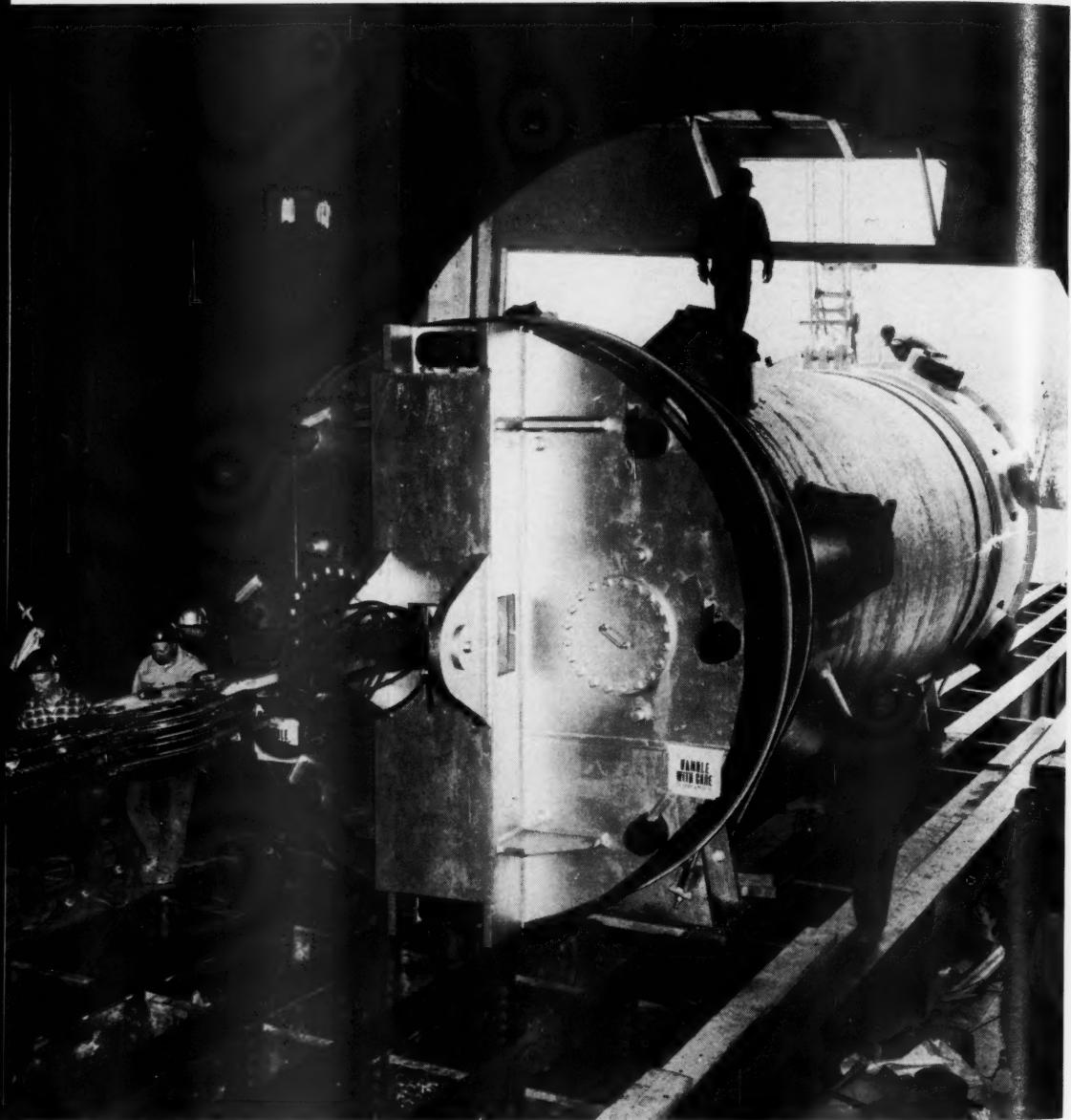
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Utilities Events Calendar

CHECK THESE DATES:

- Aug. 22-26—Western Resources Conference will be held, University of Colorado, Boulder, Colo.
- Aug. 23-26—Western Electronics Show and Convention will be held, Los Angeles, Cal.
- Aug. 24-25—National Association of Railroad and Utilities Commissioners, Committee on Accounts and Statistics, will hold meeting, Dearborn, Mich.
- Aug. 25-26—Southern Gas Association, Accounting Section, will hold transmission and distribution accounting conferences, Dallas, Tex.
- Aug. 25-27—American Movers Institute will hold annual meeting, Washington, D. C.
- Aug. 29-31—Appalachian Gas Measurement Short Course will be held, University of West Virginia, Morgantown, W. Va.
- Aug. 29-Sept. 2—American Bar Association will hold annual meeting, Statler-Hilton Hotel, Washington, D. C.
- Aug. 26-31—ABA, Section of Corporation, Banking and Business Law, will hold meeting, Shoreham Hotel, Washington, D. C.
- Aug. 27-30—ABA, Section of Administrative Law, will hold meeting, Willard Hotel, Washington, D. C.
- Aug. 28-31—ABA, Section of Mineral and Natural Resources Law, will hold meeting, Sheraton-Carlton Hotel, Washington, D. C.
- Aug. 28-31—ABA, Section of Public Utility Law, will hold meeting, Shoreham Hotel, Washington, D. C.
- Sept. 1-2—Edison Electric Institute, Street and Highway Lighting Committee, will hold meeting, Salem, Mass.
- Sept. 1-2—Southeastern Electric Exchange, Personnel Administration Section, will hold meeting, Roanoke, Va.
- Sept. 7-8—Tennessee Telephone Association will hold annual convention, Nashville, Tenn.
- Sept. 7-9—American Water Works Association, South Dakota Section, will hold annual meeting, Watertown, S. D.
- Sept. 7-9—Association of Illinois Electric Cooperatives will hold annual meeting, Springfield, Ill.
- Sept. 7-9—Joint Automatic Control Conference will be held, Massachusetts Institute of Technology, Cambridge, Mass.
- Sept. 7-9—Northwest Electric Light and Power Association will hold annual meeting, Glacier, Mont.
- Sept. 7-10—Rocky Mountain Electrical League will hold annual fall conference, Denver, Colo.
- Sept. 10-11—American Society of Mechanical Engineers will hold international air pollution congress, New York, N. Y.
- Sept. 10-18—Electrical Living Show will be held, New York Coliseum, New York, N. Y.
- Sept. 11-16—Illuminating Engineering Society will hold national technical conference, Pittsburgh, Pa.
- Sept. 12-13—Arkansas Telephone Association will hold annual convention, Hot Springs, Ark.
- Sept. 12-13—Edison Electric Institute, Residential Lighting Promotion Committee, will hold meeting, Cleveland, Ohio.
- Sept. 12-13—Michigan Telephone Association will hold annual convention, Mackinac Island, Mich.
- Sept. 12-14—New England Gas Association will hold gas utility managers' conference, Wianno Club, Mass.
- Sept. 12-14—American Gas Association will hold accident prevention conference, Minneapolis, Minn.
- Sept. 12-14—American Water Works Association, Kentucky-Tennessee Section, will hold meeting, Knoxville, Tenn.
- Sept. 14-15—Northwest Public Power Association, Accounting Section, will hold annual meeting, Wenatchee, Wash.
- Sept. 14-15—American Gas Association, Operating Section, Committee on Underground Storage, will hold meeting, Buffalo, N. Y.
- Sept. 14-16—American Water Works Association, New York Section, will hold annual meeting, Upper Saranac Lake, N. Y.
- Sept. 14-16—American Water Works Association, Virginia Section, will hold annual meeting, Virginia Beach, Va.
- Sept. 14-16—Rocky Mountain Telephone Association will hold annual convention, Denver, Colo.



Courtesy, Consolidated Edison Company of New York, Inc.

Installing Con Ed's 230-ton Reactor

Now being built at Indian Point, New York, is a nuclear plant whose reactor will utilize uranium 235 and fertile thorium by converting them into uranium 233, a man-made, fissionable material.

It is the first large-scale reactor of this type—scheduled for completion in 1961.

Public Utilities

FORTNIGHTLY

VOLUME 66

AUGUST 18, 1960

NUMBER 4



Canada's Regulatory Profile

By the Honorable E. C. MANNING*
PREMIER OF THE PROVINCE OF ALBERTA, CANADA

Regulatory bodies in Canada, far from being an impediment to a free enterprise economy, are vital in safeguarding the just rights of private, corporate, and public interests. How regulation works in the Province of Alberta and the rest of the Dominion, some of its problems, and an explanation of the functions of the National Energy Board, created in 1959, are given by the author with special reference to the export of gas to the United States.

OVER 3,000 miles of undefended boundary testify to the world that our respective nations share in friendship and understanding common ideals and concepts of life and government. Both have societies based on the recognition of the dignity and worth of the individual and economies founded on the belief that individual enterprise is a virtue to be encouraged rather than a vice to be suppressed and replaced by collectivism and the domination of the state.

Both our nations have mutual problems

*For additional personal note, see "Pages with the Editors."

arising from the conflicting interests which are not only tolerated but welcomed within the framework of our free societies. One evidence of this fact is that in both nations a system of regulatory bodies has evolved whose functions are to safeguard the legitimate interests of all by enforcing certain ground rules governing those phases of economic and industrial development in which public as well as corporate and individual interests are involved.

IN Canada, as in the United States, the functions and powers of gov-

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ernmental regulatory bodies are related closely to the issues involved in provincial or state *versus* federal jurisdiction. I need scarcely tell you that we, whose first responsibilities lie in the field of provincial administration, guard our provincial autonomy with all the zeal and vehemence of the most ardent states' righters. At the same time, we recognize that when dealing with commodities such as oil and gas, the transmission and marketing of which involve not only domestic but interprovincial and international trade and commerce, due cognizance must be given to the functions and responsibilities of regulatory bodies in all the jurisdictions involved and it must be expected that at times there will be a measure of overlapping and inevitable conflicts of jurisdictional interests. For the purpose of this article, I shall confine my references to provincial regulatory bodies in Canada, to those of my own Province of Alberta, and shall discuss their operation as they relate to two major commodities of international interest; namely, crude oil and natural gas.

In the matter of crude oil, Alberta's established supply of approximately four billion barrels is about 80 per cent of Canada's total oil reserves, and our current oil production is approximately 75 per cent of total Canadian production. In addition, Alberta is the site of the fabulous Athabasca oil sands, as yet undeveloped commercially but holding a potential reserve of between 200 and 300 billion barrels of crude oil.

ALBERTA's proven gas reserves of over 27.5 trillion cubic feet represent nine-tenths of Canada's total gas reserves, notwithstanding the fact that our proven

reserves to date are less than 10 per cent of the estimated future gas discoveries in the western Canada sedimentary basin which includes all of Alberta and extends into British Columbia, Saskatchewan, Manitoba, and the northwest territories.

It might also be appropriate to mention at this point that in Alberta the title to approximately 90 per cent of these vast oil and gas resources is vested in the government, with their development taking place under private enterprise through a system of leases, the terms of which ensure to the developer fair and equitable competitive conditions designed to encourage development and at the same time provide for the people of the province, as the joint owners of these resources, a just share of the benefits accruing from their exploitation. In the last thirteen years, since oil development became a major factor in our provincial economy, royalties and rentals and the sale of reservations and development leases have netted the public treasury of Alberta approximately \$1 billion.

Regulation's Scheme of Things

FOUR major statutes and two major regulatory boards are involved in regulating the production and utilization of oil and gas in Alberta. The statutes are:

- (1) The Alberta Pipe Line Act.
- (2) The Oil and Gas Resources Conservation Act.
- (3) The Gas Resources Preservation Act.
- (4) The Public Utilities Act.

The two major regulatory boards are:

- (1) The Oil and Gas Conservation Board.

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(2) The Board of Public Utility Commissioners.

The Pipe Line Act is administered by the provincial government Department of Mines and Minerals and regulates the construction and operation of pipelines for the transmission of oil and gas within the province, with certain limited exceptions. A person proposing to construct a pipeline must make application to the department and enclose a sketch indicating the proposed route of the line, together with the location and capacity of each proposed installation. A copy of the application must also be filed with the Oil and Gas Conservation Board.

In the case of main pipelines to transport oil or gas, a notice is published in newspapers circulated in the area indicating the proposed route and particulars of the pipeline.

IN the case of a main gas line, the Conservation Board usually holds a public hearing to which those wishing to have gas transported and those wishing to obtain gas for consumption are heard. Following the hearing, the board reports its findings to the department so that any desirable changes in the route or size of the line may be made before the permit is granted.

In the case of oil lines, there are no restrictions in the granting of the permit if oil is available for transmission. After the granting of the permit, the permittee may be instructed to commence the construction of the line by a specified date or to complete the construction of the line by a specified time, and failure to comply with such directives may result in cancellation of the permit. The statute also provides

for the granting of licenses for the operation of pipelines.

Before operation of a main gas line or a gas-gathering line may be commenced, the line must be tested to the satisfaction of the Superintendent of Pipe Lines or one of his inspectors and a license issued by the Superintendent. Other types of pipelines may be operated for six months following completion of construction and, during that period, application must be made to the Superintendent and a license obtained for the operation of the line thereafter.

Oil and Gas Conservation Board

THE Oil and Gas Conservation Act and the Alberta Gas Resources Preservation Act both are administered by the Oil and Gas Conservation Board, which is a three-man regulatory body with a full complement of engineering and other technical and administrative staff. The Conservation Act applies to every oil and gas well and the products therefrom. The intent and purpose of the act are:

- (1) To effect the conservation of the oil and gas resources of the province.



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(2) To prevent the waste of oil and gas resources.

(3) To secure the observance of safe and efficient practices in the locating, spacing, equipping, completing, reworking, testing, operating, and abandonment of wells and all the operations for the production of oil and gas.

(4) To afford to each owner an opportunity to obtain a just and equitable share of the production of any pool.

THE statute establishes normal spacing units for oil wells of either 40 or 80 acres, depending on the area where the pool is located. The normal spacing unit for a gas well is 640 acres. The Conservation Board is empowered to vary the size of the spacing units after the nature of the production from a pool is known. Oil well spacing units have been varied from 20 to 640 acres and for gas wells from 40 to 2,560 acres. The statute gives the board broad powers in all matters pertaining to the drilling, production, and conservation of oil and gas.

Among the more important of these powers are:

1. THE issuing of licenses for the drilling and operation of oil and gas wells. A license to drill and operate a well may be obtained by any company irrespective of the place of its incorporation, if it is registered under the Companies Act of Alberta. A deposit of \$2,500 is required for a licensee for one well, \$5,000 for two wells, and the deposit increases \$1,000 for each additional well until the maximum required deposit of \$10,000 is reached. The deposit is held until the well is abandoned to the satisfaction of the board.

2. THE fixing monthly of a provincial production allowable for oil equivalent to that month's market demand. The proration of production to available market became necessary in Alberta when the province's oil production far exceeded local and regional market demand. Currently, Alberta oil wells, with an aggregate permissible production of over 900,000 barrels per day, are producing in the neighborhood of 400,000 barrels daily, or at a rate ranging from 40 to 45 per cent of permissible production.

3. No scheme for repressuring, recycling, or pressure maintenance in any field or pool or for the processing storage or disposal of gas; for the gathering, storage, and disposal of water produced in any field or pool or the disposal of any fluid or other substance to an underground formation through a well may be proceeded with until the board has approved the scheme on such terms and conditions as it may prescribe. The performance of any scheme after it has been approved cannot be prevented or restrained by an injunction, judgment, or order of any court.

4. THE board, with the approval of the government, may declare the proprietor of a pipeline to be a common carrier of oil or gas or may declare any person who purchases or produces oil or gas to be a common purchaser from any pool or pools designated by the board. A common carrier or a common purchaser cannot discriminate in favor of his own oil or gas.

5. THE board, after a public hearing, may require the owner or operator of a gas well to commence or continue production of gas and deliver the gas to such

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person, pipeline, or processing plant as the board may direct. It may order the owner or operator of a gas pipeline to take delivery of, transport, or deliver gas to or from such wells, other pipelines, processing plants, or gas-distributing systems as the board may direct. It may require the owner or operator of a processing plant to take delivery of, process, or deliver gas as the board may specify. In the event that agreement cannot be reached between the parties as to price or cost, the matter may be referred to the Board of Public Utility Commissioners which is empowered to fix such prices as it deems just and reasonable.

6. THE board, after a public hearing, may order the pooling of tracts within a spacing unit for the purpose of drilling or producing a well by a person who is prepared initially to pay the cost of drilling. Such an order provides for the sharing of the cost of the well by the owners of the various tracts and for the allocation of the production obtained to each of the tracts.

7. An agreement for the unit operation of a pool or part of a pool cannot be put into effect until the agreement has been approved by the board. This gives the non-joining parties an opportunity to air their objections before the board, and also affords any owner who is anxious to have his oil or gas tract included in the unit area an opportunity to make such representations.

8. At a recent session of the provincial legislature, provisions were added to the Conservation Act respecting commercial operations in the Athabasca oil sands. With the approval of the government, the board may by general or special order restrict the total amount of oil that may be processed from the sands. Before any scheme for recovery of oil from oil sands may be proceeded with, approval of the proposal must be obtained from the board. In approving an operation in the oil sands, the board may stipulate the period during which the operation may be conducted and the maximum volume or rate of production of oil to be recovered from the sands.

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Gas Resources Preservation Act

THE other statute administered by the Conservation Board is the Gas Resources Preservation Act which empowers the board to regulate the effective utilization of the gas resources of the province, having regard to present and future domestic requirements.

No person may export gas produced in Alberta unless a permit has been granted by the board authorizing its removal. Upon receiving an application, the board holds a public hearing to consider all aspects of the proposed project and grants a permit only when it is satisfied that it is in the public interest to do so, having regard to:

- (1) the present and future domestic needs of the province, and
- (2) the volume of established gas reserves and the trends in growth and discovery.

A permit, if and when issued, designates:

- (1) The pool, field, or areas from which the permittee may remove gas or the point at which the permittee may remove gas from a pipeline in existence or to be constructed.

- (2) The annual quantities of gas that may be removed by the permittee from each pool, field, or area or from such pipeline during the interval or intervals set out in the permit.

- (3) The maximum quantity of gas that may be removed daily from each pool, field, or area or from the pipeline.

- (4) The conditions under which the removal of gas by the permittee may be diverted, reduced, or interrupted.

(5) A condition that the permittee supply gas at a reasonable price to any community or consumer within the province that is willing to take delivery of the gas at a point on the pipeline transmitting the gas and that in the opinion of the board can be reasonably supplied by the permittee.

(6) The period for which the permit is operative.

THE board, after the public hearings, reports its findings to the provincial government. If the board recommends the granting of a permit it may then be granted with the government's approval. The board may hold a public hearing to reconsider a permit (1) at the direction of the government; (2) when in its opinion circumstances arise that justify the holding of a hearing; or (3) upon the application of a permittee.

At the conclusion of such hearing, the board, with the government's approval, may amend the permit in the manner that seems just and reasonable, having regard to all the circumstances.

So that there may be a minimum of interference in the transmission of propane and butane for domestic and commercial and industrial purposes, these are exempted from the requirement of obtaining a permit if removal from the province is conducted otherwise than by means of a pipeline. Batch shipments of these products through oil pipelines may be exempted on a yearly basis.

Board of Public Utility Commissioners

THE second major provincial regulatory board in Alberta is the Board of Public Utility Commissioners, which op-

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erates under the Public Utilities Act. This is a three-man, semijudicial board, with broad regulatory powers in a variety of fields, including various financial phases of municipal administration. Its major function is the regulation of all categories of public utilities, including the granting of franchises and the fixing of pipeline tariffs and the prices that may be charged for natural gas and electric energy within the province.

The board may fix such tolls and prices on its own volition or at the direction of the government or upon an application from one or more of the parties directly affected. I have already explained that in Alberta no producer or pipeline company can refuse to sell natural gas to a local community where, in the opinion of the Conservation Board, such gas can reasonably be supplied. In such cases, if the matter of price cannot be resolved by mutual agreement between the company and the community involved, the matter may be referred to the Board of Public Utility Commissioners, which, following a public hearing, fixes what it deems to be a just and reasonable price or prices on the basis of the evidence produced at the hearing.

While the board's powers are sufficiently broad to permit the fixing of prices at any point from the wellhead to the ultimate consumer, in actual practice very few prices have ever been fixed other than at the ultimate consumer level.

National Regulatory Agencies

TURNING now to the national field, there are in Canada, as far as the regulation of energy resources is concerned, two major regulatory boards operating at federal level. One is the Board of Trans-

port Commissioners and the other, the National Energy Board.

The Board of Transport Commissioners has jurisdiction over railway and water carrier tariffs and services generally and, until recently, over the construction and operation of interprovincial pipelines.

The National Energy Board was established last year by the Canadian government following a lengthy study and report by a Royal Commission. The National Energy Board Act, which came into force on November 2, 1959, repealed the Federal Pipe Line Act and the Exploitation of Power and Fluids and Importation of Gas Act which previously had been administered by the Board of Railway Commissioners.

National Energy Board Act

THE National Energy Board Act designates that the board shall, in order to assure the best use of energy resources in Canada, regulate in the public interest:

- (a) The construction and operation of oil and gas pipelines subject to the jurisdiction of the Parliament of Canada.



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- (b) The tolls charged for transmission by such pipelines.
- (c) The export and import of gas.
- (d) The export of electric power and the construction of the lines over which the electricity is exported.

The act makes the board responsible to study and keep under review matters over which the Parliament of Canada has jurisdiction relating to the exploration for, production, recovery, distribution, sale, purchase, exchange, and disposal of energy and sources of energy within and outside of Canada and report thereon from time to time to the Minister of Trade and Commerce and to recommend to the Minister such measures within the jurisdiction of the Parliament of Canada as it considers necessary or advisable in the public interest for the control, supervision, conservation, use, marketing, and development of energy and sources of energy.

The act applies to all interprovincial pipelines for the transmission of hydrocarbons.

Since October 1, 1953, the right to construct and operate an interprovincial pipeline has been restricted to companies so authorized by special act of the Parliament of Canada.

BEFORE construction may be undertaken, a company that has obtained authorization by special act must receive from the National Energy Board a certificate of public convenience and necessity, issued with the approval of the government of Canada. In considering the application, the board must take into consideration such matters as:

- (a) The availability of oil or gas to the pipeline.

(b) The existence of markets, actual or potential.

(c) The economic feasibility of the pipeline.

(d) The financial responsibility and financial structure of the applicant, the methods of financing the line, and the extent to which Canadians will have an opportunity of participating in the financing, engineering, and construction of the line.

(e) Any public interest that in the board's opinion may be affected by the granting or the refusing of the application.

(f) The objections of any interested person.

Gas may not be exported out of Canada or imported into Canada until a license has been obtained from the National Energy Board, granted with the approval of the government.

BEFORE granting a license for export, the board shall have regard to all considerations that appear to be relevant and the board shall satisfy itself that (a) the quantity of gas to be exported does not exceed the surplus remaining after due allowance has been made for the reasonably foreseeable requirements for use in Canada, having regard to the trends in the discovery of additional gas reserves; (b) the price to be charged for the gas to be exported is just and reasonable in relation to the public interest.

No export or import license may be for a period in excess of twenty-five years, but in the case of an export license, if removal of the gas from a province in which it is produced is authorized for a lesser period, then the license is for such lesser period.

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The license also sets out the maximum annual, monthly, and daily quantities of gas that may be exported or imported.

At present a license is not required to export or import oil, but §87 of the act empowers the government of Canada by proclamation to extend the licensing provisions for gas to the licensing of oil.

THE act requires that a company applying for a certificate to construct a pipeline must file a copy of the application with the Attorney General of each province in which any part of the pipeline is to be constructed. This is to afford each province an opportunity to make representations to the National Energy Board in case any conflict in jurisdiction is envisaged.

Perhaps the most appropriate way to conclude this article would be to summarize briefly the current situation with respect to the development of Canada's natural gas resources and to indicate the actual procedures which the regulatory provisions I have outlined require to be followed by those engaged in the production and marketing of natural gas in the international field.

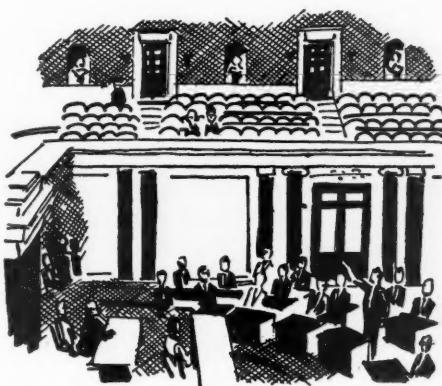
NEB's First Official Report

THE first official report of Canada's new National Energy Board places Canadian proven gas reserves as of December 31, 1959, at over 30 trillion cubic feet, of which it considers 9.3 trillion cubic feet to be surplus to Canada's domestic requirements. It estimates, on the basis of exploration and development trends already established, that proven reserves will be increased by not less than 62 trillion cubic feet in the next thirty years and that

reserves surplus to all internal Canadian requirements will, during the same period, amount to approximately 46 trillion cubic feet. Some competent geologists estimate that the ultimate recovery of natural gas from the western Canada sedimentary basin alone will reach the vicinity of 300 trillion cubic feet.

IHAVE already pointed out that the Province of Alberta comprises the major part of this sedimentary basin. Over the past nine years, wildcat exploration and drilling in Alberta have resulted in an average overall reserve growth rate of 2.9 trillion cubic feet per year. This rate may be expected to increase substantially for at least a number of years, as larger export markets provide new incentive to the industry.

As a result of recent approvals of four major export applications by the National Energy Board and the Canadian government, it has been estimated by the Canadian Petroleum Association that the next ten years will see an estimated expenditure in Canada by the industry of \$6.8 billion in oil and gas development, including a gigantic construction program to



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provide the necessary processing plants, pipelines, and other related facilities.

The marketing and utilization of the vast quantities of propane, butane, sulphur, and other by-products extracted from this gas will, in themselves, become a major industry and plans for large-scale products lines already are well advanced.

Obtaining Gas for Export

AND now a brief reference to the actual procedures required to be followed by a company desirous of obtaining gas in Alberta for sale in a market in the United States. A prospective export company must first be assured of its required supply of gas, either by purchasing gas in place and doing its own development or by entering into purchase contracts with other producers. It must then make application to the Alberta Oil and Gas Conservation Board for a permit to export from the province the gas it desires to remove. Its application is heard at a public hearing and it must satisfy the board that it has made the necessary arrangements to acquire the gas it wishes to export and has a market for the same. The board also must satisfy itself that the volume of gas requested is surplus to the present and future needs of the province.

If these requirements are met, the Conservation Board recommends to the provincial government that a permit be issued subject to such terms and conditions as it deems necessary. If the government approves the board's recommendation, the permit is issued.

IF the company's proposal involves constructing a pipeline in Canada that crosses the boundary connecting two prov-

inces, it must obtain approval to do so by a special act of the Canadian Parliament and a certificate from the National Energy Board. It must then apply to the National Energy Board for a permit to export gas from Canada and if it satisfies the board on the points I have outlined previously, the board recommends to the Canadian government that such a permit be issued. If the Canadian government approves the board's recommendation and issues the export permit, the company has then complied with all the initial requirements of Canadian regulatory bodies.

Before the company can actually implement its project it must, of course, obtain the approval of the Federal Power Commission of the United States and of the regulatory bodies of the individual states where it proposes to market the gas.

Gas Export Permit Issued

As of this date, permits for the export of gas from Alberta have been issued by the government of Alberta on recommendation of the Oil and Gas Conservation Board to six companies involving a total volume of 13,997,900 million cubic feet extending over the next twenty-five years. The maximum aggregate daily volume that may be removed is 2,115.9 million cubic feet and the maximum aggregate yearly volume is 679.9 billion cubic feet. No additional applications currently are before the Alberta Conservation Board and all permits recommended by the board have been approved by the provincial government.

Of the six companies to which permits have been issued, four are involved in the export of gas to the United States. These are: the Canadian-Montana Pipe Line

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Company, the Westcoast Transmission Company Limited, Trans-Canada Pipe Lines Limited, and Alberta & Southern Gas Company Limited.

Export permits have been approved for these applicants by the National Energy Board and by the government of Canada for an aggregate volume of 9,127,750 million cubic feet over the next twenty-five years. The permits authorize the export of an aggregate daily volume of 1,152,-750,000 cubic feet and a maximum aggregate yearly volume of 438,820 million cubic feet.

Three of these companies had previously received Federal Power Commission approval for the import into the United States of some 4 trillion cubic feet of Canadian gas. Currently pending before the Federal Power Commission and various state regulatory boards are applications by the four companies mentioned for the importation into the United States of the remaining 9,127,750 million cubic feet covered by the export permits which already have been issued by the Canadian authorities.

Regulatory Bodies Indispensable

I CONCLUDE with this one further observation: There are those who regard all regulatory bodies as a threat to the

operation of a free enterprise economy and as the sinister shadows cast before them by an approaching army of bureaucrats.

I submit that this is not true. Experience has taught democracy that a free society cannot be preserved by the mere vocal acclaim of its many virtues and advantages. The control and eradication of the abuses to which freedom itself frequently gives birth are a necessity which must be recognized. A free society can flourish and prosper only as long as self-discipline imposes and accepts whatever rules and regulations are found to be necessary to safeguard the just rights of the interrelated but sometimes conflicting private and corporate and public interests, all of which have their indisputable place in a truly democratic way of life.

THREE should never be regulation merely for the sake of regulation, but, those regulatory bodies which experience has proven necessary for the purposes which I have just stated, should be recognized and accepted as a necessary part of the complex processes of a functioning democracy in its twentieth century struggle against alien ideologies incompatible with that love of freedom with which all men are born and for which many have died.

"**T**HERE is no miraculous Salk vaccine which can dispel the crippling affliction of featherbedding make-work, which exerts such terrible toll not only upon the railroads and their employees but, in fact, upon the entire national economy. This is a kind of peril that cries out for remedy through labor-management co-operation, with a maximum of understanding, breadth of view, and statesmanship in seeking to resolve the issues on terms fair to all."

—DANIEL P. LOOMIS,
President, Association of
American Railroads.

Good Public Relations Program Counters Public Apathy



By HARRY T. PRITCHARD*

CHAIRMAN OF THE BOARD, INDIANAPOLIS POWER &
LIGHT COMPANY

The only way to overcome public apathy is for utilities to keep a well-rounded, intensive public relations program in high gear at all times. For that segment of the public—and it is a big one—which is indifferent to taxes and public ownership of utilities, the facts must be emphasized again and again. Only in this way is it possible to penetrate and impress the mind of the public with the true utility story.

MANY electric company executives have, on frequent occasions, voiced their dismay and frustration at the apparent apathy and lack of interest of the public with respect to all phases of their company's operations, despite studied efforts to project a favorable company image in the minds of their customers and of the public generally. It has been especially frustrating, after years of consistent, factual advertising in national and local media, and the utilization of numerous other methods of direct communication, to find that, except in a few areas, a significantly large part of the public still fails to recognize the difference between public and private power, and to appreciate the essentiality of helping to preserve our free enterprise system by rallying to the support of the investor-owned electric companies which are being

subjected to ever-increasing government competition.

It is an all too apparent fact that, in many service areas throughout the country, programs of one kind or another, intended to promote better public relations and to secure a better understanding of what differentiates the free enterprise utilities from government power operations, have failed, in whole or in part, to accomplish their objective. The complaint has been that the public remains largely ignorant of the electric power business.

HOWEVER, admitting the wide gap that exists between the purposeful efforts of the electric companies which desire to inform the public about their business and the receptivity of the public; admitting also the frustration that has resulted from the unavailability of fully effective means to arouse the interest of a public that is inclined to be generally

*For additional personal note, see "Pages with the Editors."

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lethargic and noninterested, much nevertheless has been accomplished in putting the image of the companies before the public in a favorable light. The result is a much more friendly and understanding appreciation of the investor-owned companies in general, and certain of them in particular, than existed a few years ago.

Customers Should Be Cultivated

IT has become vitally important that those of us in private companies shall do our best to cultivate the friendship of our customers. We may not be able to make them students of our business, but we can make them our friends. If they like us—even though they may not know or care about the technicalities of our service—they will want to resist any change from their present investor-provided power.

Previously existing contacts with customers have shriveled due to the establishing of the practice of outdoor meter reading, postcard billing, and withdrawal by many companies from the appliance retail market. There remains no regular personal contact between company representatives and customers, except those incident to payment of service bills in company offices and such indoor meter reading as remains. Even so, a very large and increasing proportion of customers pay their bills by check through the mail and many others pay through bill collecting agencies, such as local banks. The decrease of direct contact between company and customers of course complicates the problem of promoting good public relations, but the difficulties are not insurmountable and those companies which have been cognizant of the essentiality of

improving their position in the public mind, throughout their service areas, have adopted certain policies that have proven very effective.

Proved Public Relations Practices

THE companies which have been most successful in establishing a favorable position in public opinion have endorsed and applied the following practices and, to the extent that these practices have been consistently followed, the results have been uniformly good.

First: To render the best possible service to customers must be recognized as essential. Frequent interruptions and abnormally low, high, or fluctuating voltage, occurring over a long period, are fertile causes of company unpopularity. When interruptions do unavoidably occur, unless restoration of service is prompt, good will is certain to suffer. In the category of good service there must also be included facility of contact by customers with office representatives of the company, whether it be by phone or in person, respecting payment of bills, complaints, connection and disconnection requests, and matters of information. The ire of customers understandably is aroused when, because of an inefficient office system, they are sent to the wrong department or unnecessarily to several, when appearing at the office or calling by phone, to transact business with the company.

Second: An expanded, well-designed, attention-getting institutional advertising program. The value of good advertising cannot be overemphasized. All utilities recognize this, although unfor-

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tunately not all of them follow through by advertising effectively. The effect of any advertising message is transitory. If it is to create a lasting impression on the public mind, the theme must be repetitive.

This is well-illustrated by radio and television commercials, which project the same messages, week after week, to insure that they thoroughly impregnate the listening public's mind.

If a utility's policies and programs are to be impressed effectively on the public's consciousness, they must be forcefully and clearly presented over a long period, through the medium of newspapers, radio, and television.

THIRD: Active participation by company officers and other employees in civic organizations and civic projects. Wholehearted, enthusiastic, and dedicated civic service always reflects favorably on a company in its service area. If individuals of the company are favorably known in the community, it is almost certain that their company will be well-regarded.

Fourth: Generous company contribu-

tions to every worth-while civic project that requires financial support. Community chests and United funds, Red Cross, hospital fund campaigns, and similar programs should be participated in by the local utilities in reasonable degree. Assistance to youth groups is also good, since it not only pleases the parents but also registers well with the youngsters, our customers of the future, at a formative period of their lives. Abstention or token support definitely downgrades the utilities and reduces their standing as good citizens in the public mind.

FI FTH: The inculcation, in the utility's employee body, of the essentiality of courtesy so that those employees who regularly, or on occasion, do come in contact with customers, invariably convey to them the good-will policy of the company. This means not only gracious, smiling cashiers and complaint desk interviewers, but the same attitude of affability and courtesy developed in all other employees —meter readers, telephone operators, salesmen, even linemen, and, of course, every person who drives a company car or truck, because courtesy in traffic has



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become much appreciated on today's crowded streets and roads.

Much business today is transacted with a utility's departments over the telephone. Courteous and efficient handling of customer calls is essential. This has long been recognized by the Bell system companies, which are willing and anxious to train other utilities' telephone switchboard operators in the proper method of answering and transmitting calls. They know that discourteous or inept treatment of a customer, by a switchboard operator, reflects unfavorably on the telephone company as well as on the company receiving the customer's call.

SIXTH: Effective training and education of the employees, extending beyond the details of their own jobs and providing knowledge of their company, its policies, and its problems, and also encompassing facts pertaining to the investor-owned companies in general. Well-informed employees are thus enabled to influence favorably their friends and neighbors on matters concerning their own company and the free enterprise system of which it is a part.

Seventh: Cultivation of the daily and weekly newspapers published in the service area. They must be convinced of the company's integrity, essentially that of its management. They must be acquainted with the company's policies and purposes, adopted in the interest of good service and of open and aboveboard dealing with the public and the political bodies representing the people, regardless of party. They must be provided, through capable representatives, newsworthy accounts from time to time of company operations, service outages, and construction programs, general-

ly in advance of solicitation for such information. The confidence and support of the newspapers in every service area are essential to building up and then retaining good public relations.

Further Efforts Needed

THE above-stated measures have been undertaken by many of the investor-owned electric companies, in varying degrees of intensity and consistency, to influence public opinion in their favor. They have served to offset to a considerable extent, as to the companies utilizing them, the difficulties inherent in lack of adequate means for direct mass contact with their customers.

The fact remains that there are many people, customers of public service companies, who have been unaffected by the measures above listed which may have been instituted to promote good will. Certain customers (probably a small percentage of the public as a whole) refuse to recognize anything good in any utility. Their prime interest is in the cost of an essential commodity which they must buy. They are prone to consider the cost too high, despite the enviable record of price decline over the years, in the face of inflation that has doubled or tripled the cost of everything else that the public buys. A large segment of the public is apathetic and takes no interest whatever in any of the utilities that serve it. Many people in some areas do not know whether or not their electric power utility is publicly or privately owned and care little as to which it is.

OVER the period of the past twenty-five years in particular, there has been

PUBLIC UTILITIES FORTNIGHTLY

a growing awareness on the part of utility management of the need, locally and nationally, to raise the companies in public favor and obtain recognition for them as good citizens, wherever they operate.

The adverse effects of abuses, characteristic of a few companies during the holding company promotion era, have been largely overcome, and otherwise progress in upgrading public favor in local service areas has been proportionate to the effort expended.

Yet it must be admitted that no cause for smugness or self-satisfaction can exist as long as the basic problems of the utility industry remain unsolved. They will remain unsolved as long as the public remains indifferent to them, and therein lies a large part of the present frustration on the part of utility executives, for all means employed so far to arouse public interest in these problems have been ineffective in most parts of the country.

As pointed out by Ashton B. Collins in a recent address to the Public Utilities Advertising Association, four basic problems of the electric power industry, which should be understood by the public, were adduced at the Edison Electric Institute convention of 1959. The first two, pertaining to constantly increasing service bills and to the involved composition of rates, are largely within the control of the electric companies, and much is being done to solve these problems and their corollary effects.

The third and fourth problems—namely, taxes and political competition—are of a different complexion. The implication was that the electric company customers



are unaware of the taxes paid by their company or that the electric rates charged, necessarily reflected such taxes. Perhaps the average company has not been able to convey the facts to its customers. If so, it has not taken full advantage of the communication media available. Not all companies are in that category but, regardless of whether or not they have contributed to public education on the subject, the fact remains that taxes must continuously be brought to the attention of a more or less apathetic public, if the utility tax status is to be impressed and stay impressed on the public mind.

Political Aspects Need Emphasis

THE same situation appertains to the matter of political competition. The average customer is not too concerned about free enterprise where related to his utility service. He wants good service at low rates and, if an investor-owned company is providing such service, he is usually satisfied. But if a politically owned and operated utility furnishes the same quality of service, he is equally satisfied and, though he professes belief in free enterprise as a philosophy, he is wholly uninterested in helping to promote a

GOOD PUBLIC RELATIONS PROGRAM COUNTERS PUBLIC APATHY

change from political to investor-owned utility service. If his rates are lower than they would be in an investor-owned company, as would usually be the case due to federal taxes not being included in the politically owned utility rates, he conveniently forgets his free enterprise convictions and becomes a strong proponent of public power.

To hold the line and stem the trend to Socialism, have become the chief concern and worry of every investor-owned company operator. To accomplish this, it is apparent that the public, the voters, must be aroused and imbued with at least some of the same concern that harasses the utility operators. That this has not occurred, has caused some objective viewers to put the onus on the company advertising people. Perhaps the amounts budgeted for advertising have been too small on the average; perhaps institutional advertising has been slighted or displaced by other forms of advertising, such as sales promotions; perhaps too little attention has been paid, in various means of advertising, including direct mail communication, to the new customers of a company, especially young people forming new households. Advertising can accomplish much and has ac-

complished much, but it cannot do the job alone.

ADVERTISING is not doing a fully effective job, nor can it if expanded to several times its present scope. Regional meeting panels have been proposed but, though they are good as far as they go, they can reach only a small segment of customers in strictly localized areas.

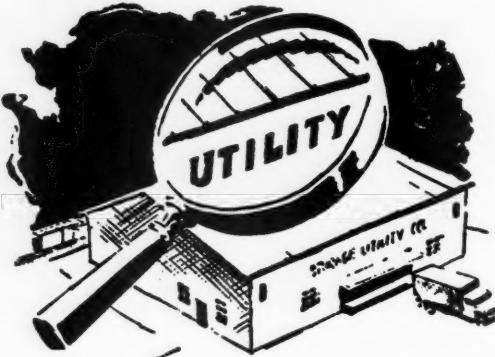
What *will* do the job? What will secure the support by a majority of the people in a given service area? The answer must be: Apply all seven of the principles heretofore outlined and extend such application, consistently and intensively, over a very long time. It must be apparent to everyone engaged in the utility business that good public relations, so essential to the success of operation, now and in the future, can be built up only gradually, over an extended period of time, but that they can be lost very quickly by a careless or negligent management that even temporarily forgets its obligation to court public favor.

Advertising alone, regardless of how good it is or how extensive, is only one tool of many that should be used to enlist public approval and support of the free enterprise utilities.

"**T**HE success of a public relations program does not depend on what the company thinks of the public, but rather on what the public thinks of it. In other words, company policies and practices must be developed with the best interests of customers and the public in mind. . . . Favorable public opinion must be deserved, good public relations must be earned. Words have significance only when backed by deeds."

—GEORGE R. CONOVER,
Vice president in charge of personnel
and public relations, Philadelphia
Electric Company.

The Outage That Was a Blockbuster



By JAMES H. COLLINS*

It was just about this time (a year ago) that the middle of the famous New York skyline went dead on a hot summer's day. "It was air conditioners!" said a half-million New Yorkers when they were blacked out. "It's inadequate wiring," said city officials. Both wrong! It was an engineering mystery, with lessons to be drawn, for it can happen elsewhere. Power company public relations departments, take notice!

In those early years of the power business a summer "outage" was hardly imaginable. All the electricity cut off when the sky was blue, the mercury in the mid-eighties?

It just couldn't happen—but it could be made to happen.

Up in the General Electric laboratories two engineers were working on a switching problem, and had laid out an experimental setup. It was supper time when they finished.

"Let's go out and eat, and pull the switch when we come back," said one. "Everything will be quiet then."

When they came back one said, "Now,

you're sure you know what is going to happen?"

"As near as anybody can know," said the other, and pulled the switch, and cut off a lot of current in Schenectady.

Which was not too bad at that date, for nobody had any deepfreezers load with steaks and chops, there were no home refrigerators, no appliances other than fans and irons, a light industrial load mostly off at that hour—those were the days!

Still, when the fellow who had pulled the switch got home he found a furious wife. She had been stalled forty minutes on a trolley car. Luckily, she blamed the power company.

"These things will happen," he said, soothingly.

*Free-lance writer, resident in Washington, D. C.
For additional note, see "Pages with the Editors."

THE OUTAGE THAT WAS A BLOCKBUSTER

Now, a Brand-new Kind of Blackout

UNTIL the summer air-conditioning load materialized, among other after-war surprises, a power outage was something that struck in winter, out of a devastating storm. It was that fine-print thing in insurance policies, an Act of God, and accepted as such.

Power and telephone companies played heroic rôles. Shivering citizens could look out and see the linemen battling to restore lifeblood to the stricken community; newspapers printed pictures of them clearing toppled trees and poles; there were accounts of the linemen called in from distant places; how the companies were organized to fight disaster. Later on, of course, the citizens would want to know why the wires had not been put underground, and were told about costs, and rates.

There was even a kind of beauty to such an outage, the placid peace of Whittier's "Snowbound." The kids were home because school was closed, but they would be out playing in the snow.

Another kind of outage has come since the war, that of the hurricane. These destructive "Hazels" and "Dianas" are not new to the eastern states, but until just lately have been thought of as history, something that happened in Granddad's days, when there were only telegraph wires to be brought down. The present generation sees them on television, but they, too are freaks of nature, and utility people played heroic rôles in repairing their ravages.

BUT when electricity is completely cut off, without warning, on a hot August afternoon, over several square miles of

two New York areas, affecting a half-million people—that is a radically new kind of outage.

A blockbuster!

It is no freak of nature. Storms can be forecast, some preparations made against them, but this kind of outage comes in a jiffy. One minute people are looking at television, their fans and conditioners are running, and the next minute the picture vanishes. Is it a tube? A fuse? Something in the building? They wait, expecting the current to go on again. They wait five minutes, a half-hour. They turn to the telephone, call the power company, the police, the newspapers, cannot get through jammed switchboards. They call neighbors, friends, and learn that the blackout is widespread, nobody knows what has happened, when the electricity will be turned on again. That will be far into the night.

Blame Falls First on the Power Company

THIS kind of blackout is likely to happen elsewhere—has happened in less newsworthy places. The New York outage was massive, and happened in the most newsworthy city, and got national attention. It gave power management furiously to think, as the French say, and to alert its public relations people. It undoubtedly has lessons for relations people. It may be their baby. It can justify their work.

In the first surprised shock, blame falls on the power company. It must have left something undone; it should have looked ahead and prevented this thing—and what is it doing to restore service?

Consolidated Edison had hundreds of trouble shooters on the job immediately,

but people could not see them, because they were down in manholes, kept as cool as possible by blowers. So there were no heroes in sight, and the public naturally assumed that nothing was being done.

City officials were prompt and insistent in demanding to know what had happened. New York has a department that deals with water, gas, and electricity. Its commissioner started an investigation, on the assumption that the trouble was due to inadequate wiring. Edison's own figures of growth were cited as showing that plant had been underbuilt. The city appointed an outside engineer to make an independent study of the blacked-out areas, and if necessary of the whole Edison system. He went to work with a staff of twenty engineers.

EDISON replied that the cause of the blackout was unknown as yet, but was being investigated. It listed other causes of cable failure such as corrosion, moisture, vibration, mechanical damage from outside agencies. Until the real cause was determined, the company maintained, the theory of inadequate wiring was premature.

To the charge that plant was underbuilt, the company replied that the affected areas had more than enough capacity for any load that might be put upon it. Against an expected demand of about 6 per cent, there was a margin of 8 per cent. The load capacity was 229,000 kilowatts. It had never been required. On a previous hot day in June it had reached 167,000 kilowatts. On the day of the outage it had been using only 140,000 kilowatts.

The company could only insist that the cause of the failure was still to be found, that any other answer would be a guess, and that it would welcome the report of the city's engineers.

The Trouble Makers? Gremlins!

WHOMO killed Cock Robin? In that celebrated case accusations flew as soon as the corpse was discovered, and the cops found numerous suspects, accessories before and after the fact.

Even engineers could only say that this outage had been conspired by gremlins. There are no gremlins. They are flyers' imaginary jinxes, but always around.

Roughly, the blacked-out areas were served by twenty cables, more than ade-



THE OUTAGE THAT WAS A BLOCKBUSTER

quate for any load likely to be put upon them, with a margin for one or two to fail, and be replaced without interruption of service.

Against all the mathematics of probability, and regardless of the weather, and with 90,000 kilowatts of capacity to spare that afternoon, there was a series of cable failures at widely separated points. What baffled Edison engineers was the burning out of so many cables within minutes. They had to find them, and ascertain causes, and this necessitated the company statement that the cause was not yet known.

Shifting load to live cables was taking long chances of failure in other cables. Finding dead cables may take hours, and there is the danger of further aggravating the outage by interfering with live cables.

WHY had not the company warned customers? It must have known that the system was overloaded, they reasoned. It had facilities for warning the public in case of disasters. If the overload had been watched, and people asked to turn off air conditioners, they would have co-operated.

But the company itself had no warning. Until nearly noon, everything was normal. Two feeders had dropped out, but that was not any threat to the two outage areas. When others dropped out within minutes, a critical engineering decision had to be made to avert further outages. More than 1,600 employees went to work tracing cables, but they were as invisible as goblins so far as the public was concerned.

"Could such a power failure happen again?" was asked afterwards. Edison engineers frankly answered, "Yes—but the odds against it are infinitesimal."

Let It Be an Air-conditioning Blackout

WHILE city investigations and criticisms are not pleasant, they can be regarded as helpful. The public feels that outside officials are doing something about its discomfort, and forgets causes, and turns its attention to when the electricity will be on again.

This kind of outage is almost certainly going to be blamed on air conditioning. "It was a sweltering day. The fans and coolers were all running full tilt. The power system got overloaded. What else would you call it? Air conditioning!"

When such a surprise outage occurs, the public is going to jump to the conclusion that its air conditioners broke the camel's back. The power company ran out of electricity. Its wires got overloaded. Blooey!

People like simple explanations, and this will be the one, unless they have been told some of the facts of life in the power business.

This is a job for relations people, and instead of telling it in dry technical language, couldn't it be told imaginatively?

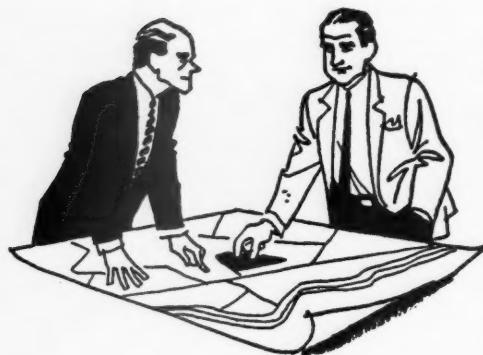
Utility companies constantly use whimsical characters, in their advertising, putting messages into their mouths, impish little "Willie Watts" and "Annie Amperes," to say how cheap electricity is, and how five cents worth of current will do dollars worth of work, dirty work, too, like getting rid of the garbage.

Suppose the power company became impish, something like this:

The Facts of Power Company Life

WE are your power company. We make and sell electricity. That is all we have to sell, and it is cheap.

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We like to sell electricity, all that our customers can be led to buy. Sometimes they try to cut down household expenses by turning things off, or by not using it in time- and money-saving appliances, but this is a poor way to economize. We constantly needle people to save money by using more of our commodity.

Electricity is a peculiar stuff to be making and selling. It has to be manufactured the very second it is used. From Benjamin Franklin's day to now, nobody has found any way to store up the amounts needed for everyday use. We have to make it when the customers want it, or "no sale." That breaks our hearts.

But then, we are to blame, not our customers. Because all the time they are buying more and more. They need more this year than they did last year, and will have to have still more next year.

So, a very important department in our business is the one that forecasts future requirements. This may sound like long-range weather predictions, *The Old Farmer's Almanac*, but it is strictly down to earth, a mathematical job, with electronic brains.

For instance, people are going to buy more air conditioners for next summer, and put more electric water and room heaters into new houses, and also old ones. We have to figure, not only how much more electricity will be needed, but in what neighborhoods. Right now, we may be working with the chamber of commerce to bring in two or three new factories. More industrial load will be needed, and more household customers in new jobs will have to be provided for.

THIS forecasting is nice work. A progressive power company fairly dribbles over future sales. So far as we can remember, the demand for electricity has never fallen, it always rises. That is one of the nice features of the power business.

This growth runs into money. We ourselves have put nearly a billion dollars into new machinery since the end of the war. Every week we have to put half a million dollars into new generators, steam boilers, and distribution lines. How this money has to be found, in competition with other industries, is quite a story, but we like to think of it, not as dollars, but as *jobs*.

Hardly anybody can picture a half-million dollars, but everybody understands *jobs*, and this growth means more *jobs* in local industry, and more *jobs* in our own organization, and more *jobs* back where electrical equipment is manufactured, to add to general prosperity.

PEOPLE like to talk about the weather and, as the saying goes, do nothing about it. Also, they like to talk about servants, how hard they are to find, how nobody wants to do housework any more.

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But about servants, they can do something. They can come to us, and get dozens of willing servants, electrical appliances. Dealers have them in abundance, they like to do housework; their wages are lower than those of a Chinaman. We hate to see housewives trying to get along without them, and are constantly prodding people to install them.

We know that this promotion of ours sometimes gets on people's nerves. They ask, "Why do you keep ding-dinging all the time? Don't you suppose we know all about these gadgets? Why spend money on advertising, to say it over and over?"

If you are annoyed—sorry! We keep ding-dinging because appliances are bought more and more, and they use nickels' worth of electricity, and our business is largely a five-and-ten proposition, the nickels and dimes mount up.

Power Is a Big-stick-and-carrot Business

If you can imagine a power company that did not like to make and sell "juice," and refused to look ahead and provide for its community growth, then that company would feel a big stick called regulation.

In the power business we have the carrot of increasing sales to lead us on. Long ago the state legislature added the stick.

Power is a utility. Once, there were separate power companies, competing with each other, or too small to do a proper job for the community. So power was declared to be a monopoly, a business for one company in each community, and, on behalf of the public, a state commission was set up to see that rates were fair, and profits regulated, and adequate service provided.

If we ever got negligent, and failed to

provide good service, and enough electricity for everybody, keeping up with community growth, then the state would step in with the big stick, and see to it.

Our business has grown not only in size since war's end, but become much more complex. Generators have grown bigger, and steam plants improved to get more energy out of each pound of coal, and distribution lines have been improved with switching facilities to send the current wherever it is wanted.

BESIDES being more complicated, most of this apparatus is out of sight, and is so technical that it would not be understood if visible. It is so technical that it cannot be easily described, and frankly we do not see why people should understand it—except this:

As power systems grow bigger, they become more complex, have to have more safeguards built in to prevent interruptions of service, have to be run by better-trained employees.

There has been the dramatic switch of the "peak" load from winter to summer. Always, people wanted the most electricity for light, and heat, in winter. Then the air conditioner was introduced, and they went for it in such a big way that they had to have the most "juice" in summer, and much more than the winter load had ever been, and often for only a few weeks in the hottest weather. This raised a tough problem for power management, because so much equipment for the summer load laid idle in winter. Efforts are being made to balance things by looking for electric cooking and heating customers.

No matter how much electricity people want, we will have it ready. It is often

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thought that air conditioners overload the system.

Occasionally this community or that will experience interruptions of service. But we have never heard of one that could be blamed on air conditioning, or overload. Always, it is some equipment shortcoming that is to blame, and engineers learn how to prevent it happening again.

So, use all the electricity you want. It is the lifeblood of this town. It makes your pay checks possible—and our own.

People Have Lots of Common Sense

VERY interesting to public relations people was the way New Yorkers behaved in their big blackout. They unquestionably had a good company image of Consolidated Edison, and felt that the company and the city would find out what had gone wrong, and who was to blame, and sat down to wait out the emergency.

There was cheerful acceptance of discomfort. When complete darkness shut down, they got along with candles, and lamps, and flashlights. What they missed most were fans and conditioners.

Such an outage in New York had disaster hazards. The two neighborhoods blacked out were mainly residential, with

few large theaters or other places liable to panic. It would hardly be possible to find two more polyglot areas in Manhattan. One of them is classified as slum.

Even in daylight, there was an immediate traffic and crime hazard, which the police department met by sending more than 1,200 officers to man blacked-out traffic intersections, and patrol in police cars, unmarked vehicles, motorcycles, on foot, uniformed, and plain clothes.

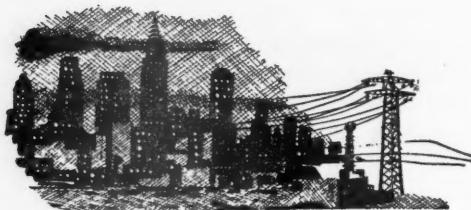
One of the first countermeasures was asking people to stay home. Television and radio were off, but word was spread by loud-speakers on police cars, and by asking doormen to pass the word. As elevators were not running, and dark stairs had to be climbed, there was general compliance.

For that particular day in the week, and the time of day, New York police have expectancy curves of accidents and crime.

Traffic dropped heavily in volume, and moved slowly, but at a good rate, even after dark. There were few accidents, only three collisions with no injuries.

THERE was a 50 per cent decrease in crime. Two cars were stolen, two pockets picked—on a bus!—two juvenile arrests were made for attempted purse snatching, two windows broken by kids. One plain-clothes detective saw two suspicious characters eying parked cars, and took them in. They had tools for opening car windows. They were from Jersey City.

Normal for that day would have been hundreds of ambulance calls for home mishaps, sickness, childbirth. The ambulances were available, could be called by telephone, but such calls were cut in half.



THE OUTAGE THAT WAS A BLOCKBUSTER

There was a rise in a type of accident not common in New York—people were hurt climbing stairs. What would happen in Los Angeles if people had to walk?

Hospitals came through very well by postponing major operations, and working by makeshift lights. One child was delivered by flashlight. The decrease in street and home accidents eased the situation.

But the blackout revealed a promotional need, for emergency power as well as lighting equipment in hospitals. They require power as much as light for equipment such as "iron lungs," and for moving patients about. Such an emergency directs attention to those needs, and power companies as well as equipment manufacturers will find a definite interest in stand-by facilities. Special designing is undoubtedly needed for equipment that has to be financed and may never be used.

ATTENTION was also directed to other needs. For example, New York's street lights are controlled by switches on each pole, automatically turning them on and off by astronomical time. These were blacked out by the power failure, and the switches had to be reset by hand, pole by pole. The city's investigation prompted a recommendation that these switches be replaced by photoelectric-operated equipment, adjusted to actual lighting conditions in the particular street. This seems to be typical of opportunities created for power sales departments, either after an outage, or as a preventive measure.

There was a surprising absence of food spoilage, because power was on again soon enough to keep it down. Health inspectors visited food stores and restaurants to ex-

amine stocks, and found less than one per cent spoilage requiring condemnation. Frozen foods, poultry, fish, and ice cream were the most perishable. The health department got a few hundred calls from housewives who asked what to do about food that smelled bad, and they were told to throw it away. Restaurants suffered the heaviest food losses, in provisions laid in for scheduled dinners, which had to be thrown or given away. Such losses could be much heavier in other parts of a city.

THERE isn't any reason to rate New Yorkers higher than other Americans in practical common sense, but they met this emergency with shrewd expeditives.

Jewish housewives brought out "jahrzeit" candles, which are kept for death anniversaries. A store manager hurried down to his darkened basement to see what could be done for his stock of birds and tropical fish. The latter have to have circulating water; their pump had stopped. He divided them in bowls, with fresh water, and they came through with hardly any losses.

"What did you do about your birds?" he was asked.

"Nothing—when the lights went out, they went to sleep."

Other Services Suffer Outages

THERE is another relations angle that has possibilities, though an edged tool, to be used with discretion.

It will be remembered that when Mr. K. visited us last summer considerable effort was directed toward preparing questions for him—why had Russia done this, and that, against our interests?

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Mr. K. had one good prepared answer: "You've done the same things."

These questions served a very good purpose—they showed the television viewers how tough he is.

During the New York blackout, attention was called to the fact that there were outages in other services, such as water mains breaking, subway trains stalled in darkness under the rivers, and so on.

It would hardly make friends for a power company to cite these failures in services, some of which are caused by outdated plant—it is said that New York has some water mains a hundred years old—and by "gremlins" crippling one subway car in a train.

But it can make for a good company image to point out that power and other utility systems are constantly being modernized, and have about the best service equipment in the community, and the best maintenance.

There is popular understanding of such a stance, for these days citizenry, in town and out, is aware of the difficulties of providing city and suburban services. The tax collector sees that they know what things cost!

CONSOLIDATED EDISON had many more friends than critics in its big outage, and must have been building a good company image as it grew in the postwar years.

For example, it is spending \$5 million for smoke abatement in three transit power plants bought from the city last summer. As long ago as 1937 Edison management set up a smoke abatement program in its power plants, which to date has cost more than \$63 million.

Such things are highly newsworthy, and reflect a community-minded company, and if, through gremlins or otherwise, such a company needs friends, it is sure to have them.

And there is no written or unwritten law forbidding a utility company to point out that such results are produced by private enterprise, under regulation.

After three months' investigation the New York Public Service Commission reported that there had been no overload; that Edison's basic network pattern was adequate; that excessive moisture might have caused seven out of twenty cables to fail almost simultaneously that day; but that the thing would probably never be explained.

In effect, "Verdict—Gremlins."

"**T**HE real meaning and purpose of Socialism is the governmental operation of all commerce and industry and the reduction of life to pure materialism. This infection creeps through our nation by deluded and misled men and by disguised organizations, fronts, and cults. These agents of infection are like hermit crabs which crawl into such terms as 'liberal,' 'progressive,' 'public electric power,' 'managed economy,' 'the welfare state,' and a half-dozen others."

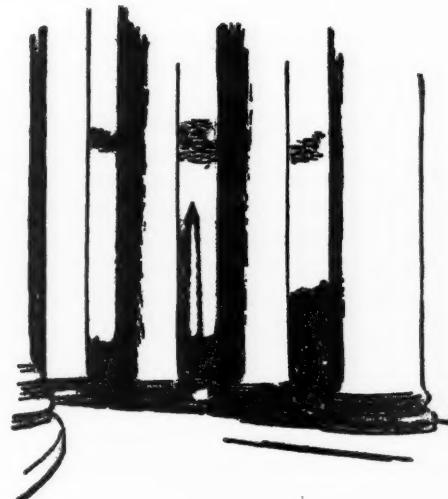
—HERBERT HOOVER,
Former President of the
United States.

Washington and the Utilities

AEC Seeks Supreme Court Review

THE Atomic Energy Commission is requesting the Department of Justice to take the necessary legal steps in the United States Supreme Court for review of the June 10th decision by the U. S. court of appeals for the District of Columbia setting aside the commission's grant of a provisional construction permit to Power Reactor Development Corporation, Inc., of Detroit, Michigan, for the construction of a fast-breeder power reactor at Lagoona Beach, Michigan. On July 25, 1960, the court of appeals denied the petition of the United States and the Power Reactor Development Corporation for reconsideration by the entire appellate court of the June 10th decision of a panel of three justices. (See, also, page 281.)

Unless reversed or set aside by the highest court, the decision of the three-judge panel could halt construction of the \$80 million project. The lower court set aside an order of the AEC which had authorized construction of the fast-breeder reactor plant at Lagoona Beach, 30 miles southwest of Detroit by a 2-to-1



vote. The court majority disagreed with AEC findings that the plant could operate without undue risk or with adequate protection to the health and safety of the public as "clearly inadequate." The decision would send the case back to the AEC for further study.

Hailed as "a victory for those of us in this heavily populated area who have a deep respect for the power of the atom" by a spokesman of the United Automobile Workers Union, the union will doubtless continue its opposition to building the plant. The Power Reactor Development Corporation was issued a provisional construction permit in August, 1956, by the AEC. Power Reactor is a group of 21 companies which have put up money for the experimental 150,000-kilowatt plant.

AEC is concerned about the future possible judicial obstruction, as well as about the Michigan project, in the licensing of nuclear plants. The AEC fears this will slow up the nation's nuclear power program. The court majority (opinion by Judge Edgerton, joined by Judge Bazelon) would require that the

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commission be assured of safety of operation even before permitting construction to start.

The AEC took the position that it is more practical to license construction so as to get the program rolling, and leave operating details to be worked out subsequently. Dissenting Judge Burger took a similar view. He stated, in his minority opinion: "The commission had issued only a provisional permit to build a plant, not to operate it."

It was pointed out, moreover, that the plant could not go into operation until the commission is satisfied with the provision for safety. Burger felt that it was not the function of the court to tell the commission that it had "made an unwise decision on the location of the plant."

Natural Gas Expansion

THE plans of four natural gas pipeline companies to build more than \$57 million in pipeline facilities have been approved by FPC Examiner Woodall. His ruling is subject to commission review. It could be accepted, rejected, or modified. Unless taken under review by the FPC or opposed by interested parties, the examiner's decision will become final in thirty days.

Woodall found that the following expansion plans should be permitted: a \$40.7 million project by Texas Eastern Transmission Corporation for 214 miles of pipeline in Pennsylvania, New Jersey, and New York; an \$8 million joint project by Texas Eastern, Transcontinental Gas Pipe Line Corporation, and New York State Natural Gas Corporation to develop a storage field in north-central Pennsylvania; a \$5 million project by Algonquin Gas Transmission Company to build a pipeline facility in Massachusetts to transport gas received from

Texas Eastern; and a \$2.9 million compressor station to be built by Transcontinental in Pennsylvania to enable it to deliver gas in the area of the Pennsylvania storage field. In addition, the FPC examiner would permit Texas Eastern to sell up to 20 billion cubic feet of gas a year to four subsidiaries of Consolidated Natural Gas System.

A GAS pipeline, which is planned to extend across Mexican territory but along the international borders of Texas and California, is likely to raise some problems of jurisdiction for the Federal Power Commission. Mexican and United States gas will both flow through the line for ultimate distribution in California and other eastern states. The legal question will be posed as to whether the FPC should have control of the export of the gas at the Texas-Mexican border and the importation of it at the California-Mexican border. In a somewhat similar situation some years ago, the commission successfully claimed jurisdiction over gas imported from Canada by the Montana Power Company on the grounds of interstate commerce.

Agreements already have been signed for the pipeline project, according to Mexico's director of the petroleum industry, Pascual Gutierrez Roldan, between Petroleo Mexicanos (Pemex) and the Tennessee Gas Transmission Company. The line will have a capacity of 750 million cubic feet a day. It will cost about \$160 million and will be financed by Mexico, which will also do the construction work.

It is estimated that it will take only eighteen months to complete the 34-inch pipeline once the obstacles to its commencement are hurdled. Mexico is eager to get started as it is desirous of a market for its gas. The U. S. should benefit cost-

WASHINGTON AND THE UTILITIES

wise since the line will be built in Mexico where right-of-way materials and labor are cheaper. The only substantial barrier in the way of the project is the question of to what extent the FPC will seek to control the gas importation.

Nuclear Power Developments

YANKEE ATOMIC ELECTRIC COMPANY, New England's nuclear power plant, will be permitted to develop its output to a full power level. According to an AEC spokesman, the Yankee plant is slated to go into operation some time after August 1st. Full-scale power capacity of Yankee Atomic is 110,000 kilowatts. But the build-up to this maximum output will be slow, AEC stated.

Electric power from the plant will be sold to ten New England utility companies. After the first 500 hours of operation or six months, the safety features of Yankee will be reviewed by the AEC and consideration of a request to let the plant operate at increased power level of up to 134,000 kilowatts will take place. It is expected that initial full power production of 110,000 kilowatts will not be attained until some time in November.

A formal application with the FPC, to build a 40,000-kilowatt atomic plant at Peach Bottom, Pennsylvania, on the Susquehanna river, has been filed by the Philadelphia Electric Company. The application increases the capacity of an earlier proposal by the same group at the same site. The new plant would be a joint effort of the Atomic Energy Commission, Philadelphia Electric, and 52 electric utilities which make up High Temperature Reactor Development Associates, Inc., which two years ago formed a non-profit group with Philadelphia Electric to sponsor atomic development.

AEC's contribution would be \$14.5 million for research, Philadelphia Electric's \$8 million, and the remaining \$16.5 million would come from HTRDA. Total cost of the nuclear plant is roughly around \$40 million. It would be a high-temperature-type reactor, cooled by helium gas and moderated by graphite. Physical structures would be built by Bechtel Corporation. General Atomic Division of General Dynamics Corporation plans to furnish the nuclear mechanisms, and Westinghouse is prepared to provide turbines and generators. A spokesman for HTRDA said it is hoped that this plant will be only a forerunner of other plants to be built by members of the nonprofit organization. HTRDA is headed by Robert E. Ginna, who is also chairman of Rochester Gas & Electric Corporation. A target date for completion of the Peach Bottom plant is set for late 1963.

AEC Cautious on Future Atomic Power Program

As a result of more experience with both operations and economics of nuclear projects building and in the planning stage, AEC and others active in the atomic field have become cautious in their prophecies. It is generally admitted that real progress continues. But commercial power has a vital concern with profits, which production costs largely decide, whereas the orders for weapons are determined, not by low cost, but by military necessity.

For all the internationally competitive declarations of two years ago, the target dates for some of the biggest projects continue to recede. Great Britain, which did some spectacular pioneering in atomic power development (closely related to Britain's need for atomic power's plu-

PUBLIC UTILITIES FORTNIGHTLY

tonium by-product), has lately announced that the Commonwealth's nuclear power total in 1966 will be about 3,000 megawatts—just over half the original goal for that year.

Russia, which in 1956 announced plans for over 2,000 megawatts by this year, has spoken only softly if at all of late, and American engineers who were given a degree of information about that nation's actual construction progress have asserted that Russia is unlikely to have more than a few hundred megawatts in late 1961.

In this country, too, forecasts are more cautious. About 400 megawatts will be the 1960 total, and the AEC estimates a growth to about 2,000 megawatts by 1965 and 2,500 the following year.

THE most conspicuous recent event in the American industry was that of a few weeks ago when the Commonwealth Edison Company of Chicago, at its Dresden (Illinois) plant, reached the full rated output of 180 electrical megawatts and fed it into the Chicago district's power pool. Significantly, perhaps, this is the first big nuclear plant set up wholly by private capital. It was opened on schedule and, according to the company, within the construction cost estimate.

Plant construction cost is a large factor in the final cost of the power itself. But in commercial ventures all power costs must be calculated on a competitive basis and, as Vice Admiral H. G. Rickover, the Navy's atomic power wizard, insisted long ago, atomic power will for some time be hopelessly more expensive than conventional fuel or water-generated power through most of the heavily populated sections of the world.

When the British declared their atomic power to be competitive, Rickover said tartly that this was based on a heavy and wholly arbitrary credit for the value of the plutonium by-product. By normal cost accounting, he declared, the British would be unable to establish a true competitive position for their atomic power for at least a decade.

The accuracy of that forecast seems supported by the recent British slicing down of the original program for rapid atomic development and by the British white paper's present admission that, even in that country, nuclear power will not become cheaper than conventional power until "about 1970."

Gas Rate Refunds Asked

THE attorney for 25 New England gas utility companies last month urged the Federal Power Commission to expedite any refunds which might be due them through an adjustment of rates charged by Tennessee Gas Transmission Company. Tennessee's pipelines supply the group which includes the Blackstone Valley Gas & Electric Company serving northern Rhode Island.

John W. Glendening, Jr., attorney for the group, told the commission that if any refunds should become due from Tennessee they should be granted as soon as possible, because New England gas distributors are faced with "fierce competition" from other fuels.

At present, he said, New England has "the highest pipeline rates being charged anywhere in the country," and the gas industry for this reason is at a competitive disadvantage with other fuels.

Telephone and Telegraph



Mobile Phone Installed on Bus

THE first mobile telephone service ever to be installed by an intercity bus system was officially inaugurated in Washington, D. C., on July 18th by John J. Allen, Under Secretary of Commerce for Transportation. Secretary Allen spoke with the United States Economic Minister at the American Embassy in London, from a Trailways Five Star luxury bus.

The mobile telephone service, still relatively uncommon for either public or private transportation facilities, was installed for Trailways by the New York Telephone Company. The telephone service is available to bus passengers on Trailways' routes serving Washington, New York, Boston, Philadelphia, and Portland, Maine.

The first mobile telephone service in the world was a ship-to-shore service installed in 1929. The first mobile service on public transportation, other than ship-to-shore, was installed in aircraft between Los Angeles and Santa Catalina Island in 1947. In the late forties, several railroads installed mobile telephones on some crack passenger trains.

On Trailways' Five Star buses, a hostess will place calls for passengers. As illustrated by Secretary Allen's call, connection can be made with any telephone

on land, sea, or air, anywhere in the world. Persons placing calls have been cautioned that they are talking on what amounts to a very big party line, since the message goes out over public airways and any person with a phone using the same channel crystals can listen in on at least one side of the conversation.

PASSENGERS will be able to call home about last-minute changes in plans and will also be able to receive calls from home or office. Passengers who expect to receive calls may learn the number of the bus phone shortly before departure and give this number to their office or home contact.

Trailways' officials have indicated that two months of testing have proven the effectiveness of the mobile phones on all sectors of the routes served by the Five Star service. The new telephone installations will not affect regular intercity bus fares on the line, according to Trailways officials.

Western Union Requests Rate Increase

RATE revisions to meet increased wage costs resulting from union contract renewals have been filed by Western

PUBLIC UTILITIES FORTNIGHTLY

Union Telegraph Company with the Federal Communications Commission. The new rates, scheduled to become effective August 17th, cover telegrams and money orders and various minor services.

The rate changes proposed are five cents higher for 15-word, full-rate telegrams in the various zones, ten cents for 50-word day letters, and increases averaging less than two cents for 50-word night letters. Corresponding adjustments in additional word charges will also be made. Charges for domestic telegraphic money orders will be five cents higher for amounts up to \$100, with graduated increases for larger amounts. Supplemental messages up to ten words accompanying overnight money orders will still be handled without additional charge.

The proposed changes, which will have to be approved by the commission, do not affect private wire services, Telemeter measured service, and Telex service. They also do not change the discount plan under which customers served by teleprinter or Desk-Fax (facsimile) connections to central offices pay 20 cents less for messages in excess of 50 a month sent over these direct connections.

GE Tests New Telegraph Transmission System

GENERAL ELECTRIC COMPANY has commenced tests on an electronic process which is said to reduce the cost of telegraph and data transmission by 60 per cent. The new system, called "Thin Route Tropo" (TRT) transmits information over long distances by bouncing a thin radio band off the troposphere.

Richard P. Gifford, GE's manager of engineering for communications, has indicated that the system works "more reliably than high-frequency radio, more economically than wire, less vulnerably

than microwave or VHF, and cheaper than conventional Tropo." Initial tests have been made between Washington, D. C., and GE's communications products department at Lynchburg, Virginia, a distance of some 152 miles. Company officials have stated that these tests proved 99.9 per cent reliable.

One of the chief factors contributing to lower costs is the use of a 4-by-8-foot antenna screen. Present systems require antennas in the neighborhood of 120 feet wide and high. At present the Federal Communications Commission has restricted the use of TRT systems to the armed forces and other governmental agencies.

Seven-digit Dialing to Be Introduced in Virginia

THE Bell system has indicated that telephone exchange names are on the way out in the Virginia area. In the near future some Chesapeake & Potomac Telephone Company customers in Virginia will begin to use seven digits, rather than the present two letters and five numbers.

Among the advantages listed for the seven-digit system are the absence of misspellings of exchange names, no letter number confusion, no name confusion, faster and more accurate dialing, and adaptability to future needs. The present two-letter, five-numeral system limits the usable central office codes in each area to 540 when central office names are used. This compares with about 800 central office codes available for one numbering plan in a seven-digit area. Growth patterns have also indicated that the present supply of direct distance dialing codes will be exhausted by 1975; however, an all numeral system will provide enough combinations to last at least through the remainder of the century.

TELEPHONE AND TELEGRAPH

Another advantage is the elimination of the "O"-zero and the "I"-one confusion. Also, some communities have objected to central office names, feeling that they did not fit the community, etc.

THE new numbering system will commence on September 1st in the Virginia company's administrative area and will include new customers and those whose numbers are changed for one reason or another. All number calling was first introduced through the Bell system in Wichita Falls, Texas, in 1958 and since it has spread to Atlanta, Chicago, and a number of other areas across the nation. Plans now call for the conversion to the seven-digit system of some one million members during the present year.

Westinghouse to Equip TV Planes

THE Westinghouse Electric Corporation will equip two special TV transmitting airplanes in the world's first airborne educational television system. Two DC-6 planes will be equipped with some \$2.2 million in television transmission equipment which will enable the broadcasting of educational programs over six midwestern states. Programming will be under the direction of Purdue University and transmission is to begin on January 30, 1961.

It is anticipated that the broadcasting plane will circle at an approximate altitude of 23,000 feet in the Montpelier, Indiana, area. Transmissions will take place from a special antenna which will dangle 24 feet below the airship. At the outset, three hours of broadcasts will be made a day, four days a week, with the planes alternating in service. The test of this method will extend for four months.

The transmission of TV signals from an aircraft has been suggested many times. The plane, being high above the earth, would not have the earth's natural curvature to cut down on transmission distances and could broadcast over a far wider area than a ground station. Obvious difficulties exist, such as a period of bad weather which might necessitate the grounding of flights and thus interrupt transmission.

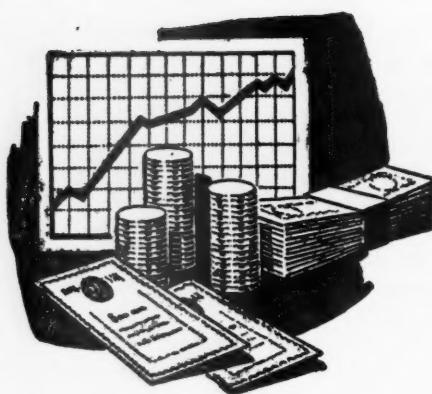
The results of this test will be of interest, however, if one considers possible future developments. It seems only a matter of time until satellites will be orbiting the earth which will broadcast or relay TV programs. This aircraft test of educational TV transmission could well provide a good bit of information for the future space relay stations which, of course, would have the advantage of not being within the earth's weather belt.

First U. S.-British Phone Cable Announced

AMERICAN TELEPHONE AND TELEGRAPH COMPANY has announced the completion of agreements with the British Post Office for construction of a new cable linking for the first time the United States and Great Britain. At the present time two other transatlantic cables exist from Newfoundland to England and the Continent.

Up to this time, however, there has been no direct cable route from the United States proper to Europe.

The new system is scheduled for construction in 1963 at an estimated cost of \$35 million. It will be jointly owned by AT&T and the British Post Office, which is the governmental agency responsible for telephone service in the United Kingdom.



How to Promote Growth in Share Earnings

In a recent talk before the public utilities forum of the National Federation of Financial Analysts Societies, Chairman E. L. Lindseth of Cleveland Electric Illuminating Company gave an interesting analysis of the essential factors in developing an electric "growth utility"—in the form of questions which the security analyst might well raise with management, in an effort to appraise the growth prospects for a particular utility as compared with others.

First, with respect to *control of expenses*, various yardsticks can be applied to test the efficiency and alertness of management. Operating and maintenance expenses can be compared with those of other companies on the basis of cost per customer, or per kilowatt-hours sold. Comparisons could also be made for man-hours of work per customer, though this figure is rarely available to the analyst. (There are several ways of making such yardstick comparisons: (1) the historical trend for the company itself; (2) comparison with other utilities in the area; (3) comparison with some "ideal" figure set up by engineers; and (4) comparison with the area or U. S. averages.)

Financial News and Comment

By OWEN ELY

In connection with generating costs, management should be asked whether constant attention is being given to the possible use of alternative methods of transportation, and to finding fuel sources closer to the company's power plants. Are generating facilities adaptable to use of alternative fuels? Has the company utilized large-scale economy interchange?

Transmission and distribution costs should also be studied. In connection with billing, collecting, and accounting, has management shown real interest in developing bimonthly billing, using computers, and adopting other methods of automation which increase productivity per employee?

How is *capital investment* being controlled? Does the ratio of plant to reve-

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FINANCIAL NEWS AND COMMENT

nues compare favorably with ratios for similar utilities? Plant can also be related to kilowatt-hour sales or kilowatt peak load. Do system "line losses" indicate a well-designed system? To what degree is interconnection with other companies used to obtain cheap power, to pool reserves, and stagger construction of new generating units? Is the company making any contribution to atomic power programs, and is it interested in other research activities?

NEXT comes *pricing* of the company's output and the *structure of electric rate schedules*. It is important to protect rates, so far as possible, against changes in fuel costs and other inflationary factors: Industrial rates are usually protected, but are residential and commercial also? Mr. Lindseth also suggests the following queries:

Is the rate structure designed to produce an increasing rate of return with growth, thus providing a built-in partial offset to inflation? To what extent also is there protection against cyclical business conditions by means of such features as guaranties, demand charges, and term of contract provisions? And are there also "interruptible" contracts to make use of temporary reserve capacity? Are the rates of return by rate classes in good balance? How about the corresponding balance through the range of size of customers in a given class? Are the company's rates by classes competitive with other companies in the general area? Does the company really know what its cost of service is for its several classes of customers? Do the rate schedules recognize the promotional opportunities in rate structuring? What is the evidence of their effectiveness and contribution to increased overall profit?

ANOTHER important objective is to maintain a "good climate" of *regulatory, political, and customer relations*. Does the company do a good job in forecasting and budgeting future earnings, so as to foresee a decline in the rate of return? With this knowledge, does it act promptly in instituting rate proceedings *before* the rate of return becomes inadequate? Next, does it do a good job of presenting its rate case, using good experts to present evidence on rate base and rate of return? And in its public relations, do company officials assume leadership in community development and civic affairs?

Regarding *marketing policies*, the company should concentrate its promotional activities on those portions of the business where growth will be most profitable, and this requires market research. The analyst will want to know whether the character of prospective new loads will permit fuller utilization of present investment, thus improving load factor. And will the respective return on the added load exceed the promotional expense required to obtain it?

It is necessary to distinguish, also, between near-term improvement in sales and load, and the longer-term potential which must be built up over a period of years. Does the company have an effective area development program to expand and diversify the local economy, with gains in residential and commercial sales resulting from new factories brought into the area?

FINANCIAL POLICIES are obviously important, determining whether reported earnings may be regarded as real earnings. Questions which may occur to the analyst are: Is the company building financial strength for the future, rather than merely trying to make an impressive current showing? Are depreciation charges and reserves adequate? How are tax reductions resulting from accelerated depreciation han-

PUBLIC UTILITIES FORTNIGHTLY

OFFERING OF SECURITIES BY PUBLIC UTILITY COMPANIES
(000 omitted)

		January 1 to June 30, 1960				January 1 to June 30, 1959					
		Total	Electric Companies	Gas Companies	Telephone Companies	Other Companies	Total	Electric Companies	Gas Companies	Telephone Companies	Other Companies
Long-Term Debt Offered Publicly	\$1,132,000	\$665,500	\$221,500	\$245,000	\$ -	\$ -	\$ 865,980	\$ 599,500	\$ 211,480	\$ 55,000	\$ -
Offered through Subscription	3,980	3,830	150	8,200	\$31,000	\$ -	91,575	89,575	80,690	94,150	\$ 6,000 8,000
Offered Privately	75,150	36,300	8,200	\$261,630	\$253,350	\$3,000	\$1,170,505	\$769,725	\$305,630	\$79,150	\$16,000
Total	\$1,211,130	\$663,150	\$221,500	\$245,000	\$31,000	\$ -	\$1,170,505	\$769,725	\$305,630	\$79,150	\$16,000
Preferred Stock Offered Publicly	\$ 38,800	\$ 3,917	\$ 6,000	\$ 2,500	\$ -	\$ -	\$ 170,792	\$ 65,142	\$ 77,650	\$ 26,000	\$ -
Offered through Subscription	91,700	85,700	6,000	\$ -	\$ -	\$ -	21,107	-	21,107	-	\$ -
Offered Privately	\$ 134,417	\$ 89,617	\$ 42,300	\$ 2,500	\$ -	\$ -	18,600	11,500	3,500	600	\$ 3,000
Total	\$ 231,196	\$ 68,296	\$ 100,181	\$ 62,719	\$ 20,772	\$2,555	\$ 210,499	\$ 76,642	\$102,257	\$ 28,600	\$ 3,000
Common Stock Offered Publicly	\$ 61,049	\$ 36,969	\$ 753	\$ -	\$ -	\$ -	\$ 186,516	\$ 123,159	\$ 1,348	\$ 62,893	\$ 1,116
Offered through Subscription	\$ 292,245	\$ 105,265	\$ 100,934	\$ 83,491	\$ 26,555	\$ 2,555	\$ 294,108	\$ 176,230	\$ 108,845	\$ 8,409	\$ 624
Total	\$ 353,792	\$ 88,803	\$ 404,864	\$ 339,341	\$ 5,555	\$1,145,736	\$518,080	\$179,052	\$ 20,740		
SEGREGATION OF FINANCING - BY PURPOSE											
Total Refunding	\$ 8,355	\$ 3,155	\$ 5,200	\$ -	\$ -	\$ -	\$ 32,172	\$ 7,172	\$ 25,000	\$ -	\$ 1,116
Total Divestment	-	-	-	-	-	\$ 1,264	-	\$ 148	-	\$ 148	\$ 1,116
New Money	\$1,205,930	\$693,150	\$276,430	\$253,350	\$3,000	\$1,138,333	\$762,553	\$280,630	\$79,150	\$16,000	\$16,000
Long-Term Debt	134,417	89,617	12,300	2,500	83,191	2,555	210,499	76,642	102,257	28,600	3,000
Preferred Stock	289,990	102,110	100,934	\$ -	\$ -	\$ -	181,360	299,399	110,045	71,302	624
Common Stock	\$ 1,629,437	\$ 884,877	\$ 399,664	\$ 339,341	\$ 5,555	\$ 1,830,192	\$ 1,138,584	\$922,932	\$179,052	\$ 19,624	\$ 19,624
Total New Money	\$ 1,637,792	\$ 888,032	\$ 404,864	\$ 339,341	\$ 5,555	\$1,863,628	\$1,145,736	\$518,080	\$179,052	\$ 20,740	\$ 20,740
Total Financing											
SEGREGATION OF FINANCING - BY TYPE											
Competitive Bidding	\$1,055,006	\$686,536	\$141,150	\$227,000	\$ -	\$ -	\$ 822,080	\$ 697,080	\$ 70,000	\$ 55,000	\$ -
Negotiated Sales	3,965,990	\$ 47,240	\$216,531	\$ 83,219	\$ -	\$ -	\$ 403,208	\$ 90,721	\$220,478	\$ 90,893	\$ 1,116
Subscription	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Competitive Bidding	\$ 27,664	\$ 21,189	\$ 3,830	\$ 150	\$ 2,555	\$ 2,555	\$ 102,018	\$ 34,925	\$ 67,093	\$ 6,295	\$ 6,624
Negotiated Sales	1,1282	19,737	753	20,772	\$ -	\$ -	299,963	221,366	23,678	39,181	2,114
No Underwriting	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 50,809	9,514	\$ -	\$ -	\$ -
Total Subscription	\$ 68,946	\$ 40,886	\$ 4,583	\$ 20,982	\$ 2,555	\$ 2,555	\$ 412,790	\$ 265,805	\$129,952	\$ 8,409	\$ 8,624
Private Sales	\$ 166,890	\$ 113,350	\$ 42,300	\$ 8,200	\$ 3,000	\$ 3,000	\$ 225,550	\$ 92,150	\$ 97,650	\$ 24,750	\$ 11,000
Total Financing	\$ 1,637,792	\$ 888,032	\$ 404,864	\$ 339,341	\$ 5,555	\$ 1,863,628	\$1,145,736	\$518,080	\$179,052	\$ 20,740	\$ 20,740

These Services Incorporated, Business Management & Financial Department, July 12, 1960 AVR

FINANCIAL NEWS AND COMMENT

dled? To what degree does the company study "economic depreciation" in the present inflationary economy, and relate accumulated surplus to total unaccounted-for economic depreciation?

Pension funds are important from the accounting angle: To what extent is the pension plan funded? How are the funds invested? What bearing will present and prospective yields have on the annual costs of the pension plan? How about unrealized appreciation, and what are the plans to reflect such appreciation?

Does the company have an efficient *budgeting system*, with responsibility and accountability properly delegated to the various management levels? Is there a sound forecasting basis for budgets? To what extent are the budgets used as control tools? Another objective of financial management should be to keep the *credit ratings* of the company's securities sufficiently high to provide investment funds at reasonable cost even during depressed periods.

SHARE EARNINGS AND DIVIDENDS are the real and final test of growth so far as the investor is concerned. The dividend pay-out ratio is of special interest, historically and currently. Continuity of growth may depend on continued good manage-

ment. Has the company adopted sound principles for developing new management and does it have an appraisal system to identify management potential and reward good performance? Does it recruit talented people from universities and engineering schools? Does it have a management training program to aid individuals in learning the broader phases of the business, and are salaries and other benefits such as incentive compensation, stock options, or profit-sharing plans adequate?

Gas versus Electric Heating— New Cost Data

REFERRING to the recent discussion of *Gas versus electric heating costs* in this department (July 7th issue) we are indebted to Marvin Chandler of Northern Illinois Gas for further information on the subject. The company's statistical department prepared a table comparing annual costs for various types of central heating in its area as shown in table, page 255.

According to this study electric resistance heating is very expensive, but perhaps the cost might be reduced through use of room thermostats, by which unnecessary heating of some rooms can be avoided as

CURRENT YIELD YARDSTICKS (Standard & Poor's Indexes)

	July 27,	1960 Range		1959 Range	
		1960	High	Low	High
Utility Bonds—A1+	4.46%	4.72%	4.45%	4.71%	4.23%
—A1	4.47	4.73	4.46	4.76	4.24
—A	4.58	4.86	4.58	4.94	4.44
—B1+	4.69	5.16	4.69	5.19	4.71
Preferred Stocks*	4.70	4.88	4.69	4.90	4.45
Utility Common Stocks	3.86	4.11	3.75	4.13	3.71
Yield Spread: A1+ Bonds Exceeded Common Stocks	0.60	0.61	0.70	0.58	0.51

*Twelve industrial and two utility issues (high-grade).

PUBLIC UTILITIES FORTNIGHTLY

JUNE-JULY UTILITY FINANCING

Date (Mill.)	Amount	Description	Price To Public	Under- writing Spread	Offer- ing Yield	Aver. Yield For Securities Of Similar Quality	Moody Rating	Success Of Offer- ing
<i>Bonds and Debentures</i>								
6/2	\$30	Michigan Wisc. P. & L. 1st (s.f.) 5½s, 1980	102.07	1.27C	5.70%	5.05%	Baa	a
6/3	40	Southern Elec. Generating 1st (s.f.) 5½s, 1992	100.06	.72C	5.20	4.89	A	b
6/7	60	Midwestern Gas Transm. 1st (s.f.) 5½s, 1980*	100.59	1.20N	5.70	—	—	b
6/8	12	Washington Gas Light 1st (s.f.) 5½s, 1985	100.70	.92C	5.20	4.85	A	a
6/10	25	Baltimore Gas & Elec. 1st & ref. (s.f.) 4½s, 1980	101.60	.79C	4.75	4.55	Aaa	b
6/15	50	Consolidated Edison 1st & ref. 4½s, 1990	100.80	.64C	4.70	4.58	Aa	b
6/17	3	Savannah Elec. Deb. (s.f.) 5½s, 1985	101.40	1.22C	5.15	5.07	Baa	d
6/17	5	Savannah Elec. 1st 5½s, 1990	102.72	1.00C	4.95	4.84	A	d
6/28	17	Gulf States Utilities 1st 4½s, 1990	100.87	.76C	4.82	4.58	Aa	b
6/29	25	Tampa Elec. 1st 5½s, 1990	102.52	.78C	4.84	4.58	Aa	c
6/29	12	Southern Union Gas S. F. deb. 5½s, 1985	100.00	1.00N	5.50	5.08	Baa	a
7/7	4	Sierra Pacific Power Deb. (s.f.) 5½s, 1985	101.69	1.50C	5.50	—	Ba	a
7/8	24	Mississippi River Fuel Deb. S. F. 5½s, 1980	99.70	1.00N	5.40	5.08	Baa	a
7/8	5	Gulf Power 1st 5s, 1990	101.00	.85C	4.94	4.82	A	b
7/12	10	Laclede Gas 1st (s.f.) 4½s, 1985	101.09	.88C	4.81	4.80	A	a
7/13	10	Central Illinois E. & G. 1st 5s, 1990	101.96	.81C	4.88	4.80	A	b
7/14	30	Northern Illinois Gas 1st (s.f.) 4½s, 1985	100.37	.78C	4.60	4.54	Aa	b
7/20	5	New Jersey P. & L. 1st 4½s, 1990	101.19	.80C	4.80	4.77	A	b
7/27	23	Southern Counties Gas 1st (s.f.) 4½s, 1985	102.21	.64C	4.60	4.77	A	c
7/27	38	Consumers Power Conv. Deb. 4½s, 1975**	100.00	.19C	4.38	4.52	Aa	—
<i>Preferred Stock</i>								
6/29	6	Northwest Natural Gas 5.72% (S.F.)	100.00	2.00N	5.72	—	—	a
7/8	5	Gulf Power 5.16% Pfd.	102.18	2.05C	5.05	—	—	d
<i>Common Stock—Offered to Stockholders</i>								
6/24	1	West Ohio Gas	17.50	—	5.71	9.17	—	
7/8	1	New Britain Gas Light	39.00	N	5.10	9.09	c	
7/9	5	Laclede Gas	20.25	N	5.19	7.14	b	
7/28	30	El Paso Natural Gas	29.00	N	4.48	5.71	—	
<i>Common Stock—Offered to Public</i>								
6/29	1	Arkansas Western Gas	22.63	1.59	3.98	6.37	a	

*For each \$1,000 bond the holder is entitled to purchase four shares of common stock at \$15 from January 1, 1964, through December 31, 1973. **Offered to common stockholders and employees on the basis of \$100 debenture for each 25 shares common held. N—Negotiated. C—Competitive. a—It is reported that the issue was well received. b—It is reported that the issue was fairly well received. c—It is reported that the issue sold somewhat slowly. d—It is reported that the issue sold slowly.

Source of data, Irving Trust Company

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desired. Smaller houses are said to be "well insulated"; this is an important factor with the heat pump, although of course it applies to other heating methods as well. The heat pump is described as air-to-air, with auxiliary resistance heating; under other conditions such as water-to-air or a warm climate, there would be less need for auxiliary heating, we assume, which would lower the operating cost. The new figures compare as follows with those which we quoted from a gas utility in the earlier story, for a small home:

	<i>Nor. Ill.</i>	<i>Other</i>
	<i>Gas Data</i>	<i>Utility</i>
Natural Gas	\$129	\$ 97
Electric Resistance Heating .	545	600
Electric Heat Pump	272	268

Obviously, it is difficult to get any exact comparisons because each service has its own peculiar factors relating to installation costs, annual servicing, convenience, and availability, etc.

THE following is quoted from an article in *Flame*, published by Northern Illinois Gas, entitled "Electric Heat Was Here—Past Winter Proves Claims for Electric Home Heating Inaccurate":

During February, March, and April of this year, NI-Gas records show approximately 100 home owners in our service area scrapped their electric heating systems and converted to natural gas. Many more have requested similar conversions to natural gas this summer

in spite of the added expense for new gas equipment.

One couple, according to *Flame*, decided this March that they could not afford to use electric heat. They kept the house temperature low during winter days, two bedrooms always were closed off, and just enough heat was used in the basement to keep pipes from freezing. Yet the total electric bill for the nine-month period was \$454.

According to *Flame*, "Home owners also complain about the lack of comfort with electric heat; uneven temperatures, extremely high humidity causing water and ice on windows, wet floors, and cold basements. In some homes the electric cable buried in the ceiling has cracked the plaster. . . . Electric heat costs $4\frac{1}{2}$ times as much as gas." But the latter statement refers only to resistance electric heating. The company's own figures show that the heat pump costs about half as much as resistance heating or about twice that of gas—with the added advantage of summer air conditioning. It is an interesting debate—perhaps we can now hear from Commonwealth Edison?

\$421 Million Spent on Atomic Reactors to Date

THE AEC announced in a recent bulletin that during the twelve months ended March 31st, \$202 million had been

	<i>Smaller</i>	<i>Larger</i>	<i>Larger Homes—</i>
	<i>Homes</i>	<i>Homes</i>	<i>Ratio to Gas</i>
Natural Gas	\$129	\$156	—
Propane Gas	266	323	2.1
Fuel Oil No. 2	166	202	1.3
Electricity—Resistance	545	661	4.2
—Heat Pump	272	331	2.1
Bituminous Coal—Hand-fired*	177	215	1.4
—Stoker-fired*	127	.155	1.0

*Different grades of coal used.

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spent on civilian nuclear reactor projects under active design or construction in the United States, of which amount over half was spent by the electric utilities.

The commission's survey also indicated that total estimated costs for all civilian reactor projects now actively under design or construction—55 projects as compared with 48 projects on December 31, 1959—are about \$928 million, of which \$421 million had been incurred up to March 31, 1960, and \$507 million remain to be incurred.

The \$57 million Yankee plant, sponsored by ten New England companies, is a pressurized water reactor built by Westinghouse and Stone & Webster. The future cost of generating electricity is estimated at 12 to 14 mills per kilowatt-hour compared with 8 to 10 mills average

for conventional fuels in New England. It is expected that kilowatt-hour costs for the two types of generation will "cross" in five or ten years.

Incidentally, TVA seems to be getting into the nuclear power business. It has been authorized to operate the 25,000-kilowatt experimental gas-cooled reactor being built at Oak Ridge at an estimated cost of \$3 million by the AEC.

DUE to a plethora of coal and oil, the British government has decided to abandon its speed-up in the nuclear power program, and is reducing the amount to be spent in the next seven years by about \$336 million. (However, of this amount \$84 million will be spent on conventional power stations.)



FINANCIAL DATA ON GAS UTILITY STOCKS

		Annual Rev. (Mill.)	7/26/60	Divi- idend Rate	Approx. Price About	Recent Share Yield	Recent Share Earns.	Per Cent Increase In Share Earn. Recent 5-yr. Aver.	Price- Earn. Ratio	Div. Pay- out	Appros. Common Stock Equity
<i>Pipeline and Integrated Systems</i>											
\$ 6 O	Ala. Tenn. Nat. Gas	25	\$1.20	4.8%	\$1.58Ma	12%	8%	15.8	76%	43%	
227 S	American Nat. Gas	66	2.60	3.9	4.57Ma	14	7	14.4	57	40	
111 A	Arkansas Louisiana Gas	33	1.00	3.0	1.68De	38	50	19.6	60	40	
62 O	Colo. Interstate Gas	36	1.25r	3.5	1.73Ma	NC	11	20.8	72	26	
465 S	Columbia Gas System	20	1.00	5.0	1.46Ma	6	6	13.7	69	45	
21 O	Commonwealth N. G.	22	1.10	5.0	1.64De	1	6	13.4	61	52	
12 S	Consol. Gas Util.	24	.90b	3.8	1.59Ap	10	15	15.1	57	59	
324 S	Consol. Nat. Gas	45	2.20	4.9	3.02Ma	D12	3	14.9	73	58	
452 S	El Paso Nat. Gas	32	1.30	4.1	1.66De	3	11	19.3	78	21	
55 S	Equitable Gas	35	1.85	5.3	2.51Je	D4	11	13.9	74	46	
36 O	Houston N. G.	38	.80	2.1	2.22Ap	57	9	17.1	36	20	
24 O	Kansas Nebr. Nat. Gas	24	1.04	4.3	1.85Ma	22	6	13.0	56	36	
125 S	Lone Star Gas	42	1.80	4.3	2.47Ma	4	6	17.0	73	43	
88 S	Miss. River Fuel	31	1.60	5.2	2.19De	12	5	14.2	73	50	
31 S	Montana Dakota Util.	28	1.20	4.3	1.92Ma	9	5	14.6	63	30	
29 O	Mountain Fuel Supply	26	1.20	4.6	1.77De	13	4	14.7	68	53	
94 S	Natl. Fuel Gas	23	1.15	5.0	1.67Ma	D8	6	13.8	69	52	
159 S	Northern Nat. Gas	28	1.40	5.0	2.03Ma	26	7	13.8	69	32	
43 S	Oklahoma Nat. Gas	28	1.24	4.4	2.20Ap	15	5	12.7	56	34	
137 S	Panhandle East. P. L.	42	1.80	4.3	3.30De	18	9	12.7	55	38	
16 O	Pennsylvania Gas	25	1.20	4.8	2.61De	23	4	9.6	46	59	
226 S	Peoples G. L. & Coke	63	2.30	3.7	4.17Ma	13	8	15.1	55	43	
33 O	Pioneer Natural Gas	25	.88	3.5	1.40De	27	9	17.9	63	41	
122 S	Southern Nat. Gas	36	2.00	5.6	1.82Ma	D9	—	19.8	110	36	
46 O	Southern Union Gas	23	1.12	4.9	1.50De	7	3	15.3	75	29	
463 S	Tenn. Gas Trans.	22	1.10	5.0	1.29Ap	19	17	17.1	85	26	
296 O	Texas East. Trans.	30	1.40	4.7	2.28Ma	11	4	13.2	61	21	

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Annual Rev. (Mill.)		7/26/60		Divi- dend Rate	Approx. Yield	Recent Share Earns.	Per Cent Increase In Share Earnings Recent 5-yr. Aver.	Price- Earn. Ratio	Div. Pay- out	Appros. Common Stock Equity
<i>(Continued)</i>										
116 S	Texas Gas Trans.	36	1.40	3.9	2.53Ma	23	.9	14.2	55	24
147 O	Transcont. Gas P. L.	21	1.20b	5.7	1.18Je	2	6	17.8	102	20
354 S	United Gas Corp.	30	1.50	5.0	2.20Ma	D8	2	13.6	68	41
Averages				4.5%		12%	8%	15.3	67%	
<i>Retail Distributors</i>										
34 S	Alabama Gas	31	\$1.60	5.2%	\$2.44Ma	15%	1%	12.7	57%	35
57 O	Atlanta Gas Light	39	1.80	4.6	3.67My	48	6	10.7	49	39
3 O	Berkshire Gas	19	1.00	5.3	1.18My	D19	6	16.1	85	41
7 A	Bridgeport Gas	30	1.68	5.6	1.89Ma	D29	5	15.9	89	48
6 O	Brockton-Taunton Gas ..	19	1.00	5.3	1.22De	D6	14	15.6	82	41
89 S	Brooklyn Union Gas	28	1.20	4.3	1.78Je	9	6	15.7	67	42
45 O	Central Elec. & Gas	26	1.20	4.6	1.94Je	14	9	13.4	62	18
14 O	Cent. Indiana Gas	15	.80	5.3	.92My	15	—	16.3	87	58
6 O	Chattanooga Gas	44	—	—	.30F	D21	—	15.0	—	44
16 O	Elizabethtown Gas	37	1.60	4.3	3.36Ap	21	11	11.0	48	79
77 O	Gas Service	34	1.72	5.1	2.88Je	16	8	11.8	60	35
9 O	Hartford Gas	49	2.00	4.1	2.90Ma	8	—	17.0	69	51
3 O	Haverhill Gas	28	1.60	5.7	1.97My	D11	12	14.2	81	53
21 O	Indiana Gas & Water ...	23	1.00b	4.3	1.63Je	10	5	14.1	61	46
58 S	Laclede Gas	22	1.05	4.8	1.45Ma	18	8	15.2	72	38
7 O	Mich. Gas Utils.	16	.60	3.8	1.10Je	33	5	14.5	55	37
53 O	Minneapolis Gas	32	1.55	4.8	2.09Ma	2	—	15.3	74	43
18 O	Miss. Valley Gas	22	1.20	5.5	1.93Ma	D14	—	11.4	62	37
6 O	Mobile Gas Service	26	1.10	4.2	1.45Ma	10	4	17.9	76	38
8 O	New Haven Gas	39	2.00	5.1	3.24De	5	5	12.0	62	68
16 O	New Jersey Nat. Gas ...	23	.90	3.9	1.60Je	12	12	14.4	56	36
105 O	Northern Illinois Gas ...	39	1.20	3.1	2.13My	24	14	18.3	56	42
10 O	North Penn Gas	12	.65	5.4	1.15Ma	31	10	10.4	57	60
20 O	Northwest Nat. Gas	20	.84	4.2	*1.60Je	*30	*11	*12.5	53	36
307 S	Pacific Lighting	48	2.40	5.0	3.16je	22	2	15.2	76	41
12 O	Piedmont Nat. Gas	13	.50	3.8	.88Ma	10	—	14.8	57	27
2 O	Portland Gas Lt.	16	.75m	4.7	1.93De	D12	13	8.3	39	27
11 A	Providence Gas	11	.56	5.1	.65De	8	5	16.9	86	48
4 A	Rio Grande Valley Gas ..	4	.16	4.0	.32De	D6	7	12.5	50	46
5 O	So. Atlantic Gas	14	.80	5.7	.87De	D28	—	16.1	92	30
16 S	So. Jersey Gas	26	1.00	3.8	1.42je	12	13	18.3	70	51
36 S	United Gas Improvement	50	2.40	4.8	3.39Ma	1	10	14.8	71	49
63 S	Wash. Gas Light	50	2.40	4.8	3.90Ma	D8	3	12.8	57	39
18 O	Wash. Nat. Gas	25	—	—	1.39De	111	20	18.0	—	38
11 O	Western Ky. Gas	18	.70	3.9	1.88Ap	NC	15	9.6	37	36
Averages				4.7%		10%	6%	15.1	67%	



FINANCIAL DATA ON TELEPHONE, WATER, AND TRANSIT STOCKS

Annual Rev. (Mill.)		7/26/60		Divi- dend Rate	Approx. Yield	Recent Share Earns.	Per Cent Increase In Share Earnings Recent 5-yr. Aver.	Price- Earn. Ratio	Div. Pay- out	Appros. Common Stock Equity
<i>Communications</i>										
\$6,771 S	American T. & T. (Cons.)	89	\$3.30	3.7%	*\$5.36My	* 8%	* 4%	* 16.6	62%	64
377 A	Bell Tel. of Canada	47	2.20	4.7	2.39De	12	—	19.7	92	62
51 O	Cin. & Sub. Bell Tel.	91	4.50	4.9	5.57De	8	2	16.3	81	77
288 A	Mountain Sts. T. & T.	195	6.60	3.4	10.33My	15	7	18.9	64	59
380 A	New Eng. T. & T.	36	1.72	4.8	2.28je	5	7	15.8	75	59
1,040 S	Pacific T. & T.	27	1.14	4.2	1.39My	7	6	19.4	82	57
128 O	So. New Eng. Tel.	44	2.20	5.0	2.51De	D3	5	17.5	88	65
Averages				4.4%		7%	4%	17.7	78%	

PUBLIC UTILITIES FORTNIGHTLY

<i>Annual Rev. (Mill.)</i>	<i>(Continued)</i>	<i>7/26/60 Price Abous</i>	<i>Divi- dend Rate</i>	<i>Approx. Yield</i>	<i>Recent Share Earnings.</i>	<i>Per Cent Increase In Share Earnings Recent 5-yr. Aver.</i>	<i>Price- Earn. Ratio</i>	<i>Divi. Pay- out</i>	<i>Appre. Common Stock Equity</i>
Independents									
7 O	Anglo-Canadian Tel.	40	\$1.20	3.0%	\$3.37Ma	9%	21%	11.8	36% 44
45 O	British Col. Tel.	45	2.20	4.9	3.08Ma	90	—	14.6	71 28
4 O	Calif. Inter. Tel.	14	.70	5.0	.53Ma	45	NC	26.4	132 24
25 O	Calif. Water & Tel.	30	1.36	4.5	1.79Ma	—	5	16.8	76 36
22 O	Central Tel.	21	.88b	4.2	1.60Je	6	—	13.1	55 33
5 O	Commonwealth Tel.	21	.90	4.3	1.47De	9	8	14.3	61 35
5 O	Florida Tel.	26	1.00	3.8	1.32De	32	4	19.7	76 40
1,081 S	General Tel. & Elec.	28	.76	2.7	*1.10Je	—	10	*25.5	69 43
23 O	Hawaiian Telephone	22	1.00	4.5	*1.32Je	3	*4	*16.7	76 44
8 O	Inter-Mountain Tel.	16	.80	5.0	.77De	D15	—	20.8	104 53
26 S	Rochester Tel.	23	1.00	4.3	1.54De	3	5	14.9	65 36
12 O	Southwestern St. Tel.	23	1.20	5.2	1.60Je	2	3	14.4	75 42
13 O	Tel. Service of Ohio	29	.35q	1.2	1.21Ma	35	8	24.0	29 32
42 O	United Utilities	42	1.45	3.5	1.95De	19	14	21.5	74 39
19 O	West Coast Tel.	27	1.20	4.4	1.89Ma	36	5	14.3	63 37
276 S	Western Union Tel.	43	1.40	3.3	2.59De	31	15	16.6	54 87
Averages					3.9%	19%	7%	17.8	70%
Water Companies									
<i>Holding Companies</i>									
48 S	American Water Works .	21	\$.80	3.8%	\$1.46De	44%	7%	14.4	55% 19
<i>Operating Companies</i>									
5 O	Bridgeport Hydraulic ...	37	\$1.70	4.6%	\$1.86De	6%	5%	19.9	91% 53
17 O	Calif. Water Service ...	26	1.20	4.6	1.63My	D3	6	15.9	74 37
5 O	Elizabethtown Water ...	25	1.20	4.8	2.20De	17	—	11.4	55 60
12 S	Hackensack Water	52	2.40	4.6	4.36De	32	6	11.9	55 35
10 O	Indianapolis Water	25	1.20s	4.8	1.66Ma	25	5	15.1	72 34
6 O	Jamaica Water	41	2.20	5.4	3.18Ma	D3	17	12.9	69 28
5 O	New Haven Water	67	3.40	5.1	2.91De	D12	—	23.0	117 55
2 O	Ohio Water Service	27	1.50b	5.6	1.75Ma	10	—	15.4	86 33
11 O	Phila. & Sub. Water ...	59	1.80s	3.1	3.29Ma	31	5	17.9	49 29
3 O	Plainfield Un. Water	19	1.10	5.8	2.31De	44	12	8.2	43 66
5 O	San Jose Water	38	1.30	3.4	2.22Je	D2	10	17.1	59 41
11 O	Scranton-Springbrook ...	25	1.20	4.8	1.78Ma	6	6	14.0	67 29
7 O	South. Calif. Water	20	1.00	5.0	1.36Ma	25	8	14.7	74 36
4 O	Southern Gas & Water ..	22	.80d	3.6	1.81Ma	30	5	12.2	44 19
Averages					4.7%	15%	6%	15.0	68%
<i>Transit Companies</i>									
21 O	Baltimore Transit	7	—	—	\$1.02De	72%	11%	6.9	— 45
12 O	Cincinnati Transit	7	\$.30	4.3%	.91De	193	—	7.7	33% 56
66 S	Fifth Ave. Lines	20	1.00t	5.0	.23De	—	—	—	65
322 S	Greyhound Corp.	22	1.00	4.5	1.81De	D5	7	12.2	55 62
26 S	Nat. City Lines	26	2.00	7.7	2.22De	33	—	11.7	90 92
13 O	Niagara Frontier Trans.	13	.60	4.6	.76De	—	—	17.1	79 67
20 A	Pittsburgh Rys.	11	.25	2.3	—	—	—	—	— 90
6 O	Rochester Transit	7	.40	5.7	1.08De	26	—	6.5	37 100
21 O	St. Louis P. S.	9 $\frac{1}{2}$.80	8.4	.77De	13	—	12.3	104 93
13 S	Twin City R. T.	9	—	—	.59De	146	—	15.3	— 65
20 O	United Transit	6	.70	11.7	.89De	18	2	6.7	79 54
Averages					5.4%	2%	9.9	66%	

A—American Stock Exchange. O—Over-counter or out-of-town exchange. S—New York Stock Exchange. Ja—January; F—February; Ma—March; Ap—April; My—May; Je—June; Jy—July; Au—August; Se—September; Oc—October; N—November; De—December. NC—Not comparable. NA—Not available. D—Decrease. *On average shares. b—Also 30 per cent stock dividend December, 1959. d—Also 1 per cent stock dividend quarterly. e—Also 3 per cent stock dividend January 7, 1960. m—Also 10 per cent stock dividend January 15, 1960. q—Also 3 per cent stock dividend December 31, 1959. r—Also 40 per cent stock dividend June 13, 1960. s—Also 10 per cent stock dividend March 31, 1960. t—Paid to date.



What Others Think

Political Platforms—1960

POLITICAL platforms are put together in the heat of political maneuvering at convention time. They quite often are completely ignored following the election, after having been used as a political drum. However, past experience does indicate that the platform very often indicates the prevailing temper of the party at a particular moment even if specific pledges are later ignored.

The Democratic party met in Los Angeles and on July 12th released its political manifesto for the 1960 election. The 54-page publication might have held a small novel, such is its length. Party critics have been quick to quip that it indeed reads like a novel, "The Rights of Man" by Chester Bowles et al. Not much spice to the plot, but quite a lot is said about the "good guys" and the "bad guys," as they say of the TV western. The "bad guys" in this opus are obviously Republicans.

The hot debate over the civil rights plank did much to obscure other planks that could well have a bearing on the utility industries. The closing of tax "loopholes," depletion allowances, natural resources, and minimum wage, all received party attention. Such is the length of this document and so distracting was the civil rights debate, that little of the

exact language of the platform was carried in print. It is this writer's belief that these exact quotations from the platform give an inside view into the present temperament of the Democratic party on a number of issues vital to the utility industry.

Regarding natural resources, the platform states:

A thin layer of earth, a few inches of rain, and a blanket of air make human life possible on our planet.

Sound public policy must assure that these essential resources will be available to provide the good life for our children and future generations.

Water, timber, and grazing lands, recreational areas in our parks, shores, forests and wilderness, energy, minerals, even pure air—all are feeling the press of enormously increased demands of a rapidly growing population.

Natural resources are the birthright of all the people.

The new Democratic administration, with the vision that built a TVA and a Grand Coulee, will develop and conserve that heritage for the use of this and future generations. We will reverse Republican policies under which America's resources have been wasted,

PUBLIC UTILITIES FORTNIGHTLY

depleted, underdeveloped, and recklessly given away.

We favor the best use of our natural resources, which generally means adoption of the multiple-purpose principle to achieve full development for all the many functions they can serve.

THREE has been much talk regarding Russia surpassing the United States in the development of energy sources. Regarding "energy" the Democratic platform has this to say:

The Republican administration would turn the clock back to the days before the New Deal, in an effort to divert the benefits of the great natural energy resources from all the people to a favored few. It has followed for many years a "no new starts" policy.

It has stalled atomic energy development; it has sought to cripple rural electrification.

It has closed the pilot plant on getting oil from shale.

It has harassed and hampered the TVA.

We reject this philosophy and these policies. The people are entitled to use profitably what they already own.

The Democratic administration instead will foster the development of efficient regional giant power systems from all sources, including water, tidal, and nuclear, to supply low-cost electricity to all retail electric systems, public, private, and co-operative.

The Democratic administration will continue to develop "yardsticks" for measuring the rates of private utility systems. This means meeting the needs of rural electric co-operatives for low-interest loans for distribution, transmission, and generation facilities;

federal transmission facilities, where appropriate, to provide efficient low-cost power supply; and strict enforcement of the public preference clause in power marketing.

The Democratic administration will support continued study and research on energy fuel resources, including new sources in wind and sun. It will push forward with the Passamaquoddy tidal power project with its great promise of cheaper power and expanded prosperity for the people of New England.

We support the establishment of a national fuels policy.

The \$15 billion national investment in atomic energy should be protected as a part of the public domain.

IN the general area of natural resources and resource development, the Democratic party stated:

. . . long-range programing of the nation's resource development is essential. We favor creation of a council of advisors on resources and conservation, which will evaluate and report annually upon our resource needs and progress.

We shall put budgeting for resources on a businesslike basis, distinguishing between operating expense and capital investment, so that the country can have an accurate picture of the costs and returns. We propose the incremental method in determining the economic justification of our river basin programs. Charges for commercial use of public lands will be brought into line with benefits received.

AHUGE section of the platform recommendations went to the topic of "transportation." The effect on the nation's transportation system, if even a

WHAT OTHERS THINK

few of these recommendations are put into effect, could have far-reaching results and even larger implications. The platform states:

Over the past seven years, we have watched the steady weakening of the nation's transportation system. Railroads are in distress. Highways are congested. Airports and airways lag far behind the needs of the jet age.

To meet this challenge we will establish a national transportation policy, designed to co-ordinate and modernize our facilities for transportation by road, rail, water, and air.

Air. The jet age has made rapid improvement in air safety imperative. Rather than "an orderly withdrawal" from the airport grant programs as proposed by the Republican administration, we pledge to expand the program to accommodate growing air traffic.

Water. Development of our inland waterways, our harbors, and Great Lakes commerce have been held back by the Republican President.

We pledge the improvement of our rivers and harbors by new starts and adequate maintenance.

A strong and efficient American-flag Merchant Marine is essential to peace-time commerce and defense emergencies. Continued aid for ship construction and operation to offset cost differentials favoring foreign shipping is essential to these goals.

Roads. The Republican administration has slowed down, stretched out, and greatly increased the cost of the interstate highway program.

The Democratic party supports the highway program embodied in the acts of 1956 and 1958 and the principle of federal-state partnership in highway construction.

We commend the Democratic Congress for establishing a special committee which has launched an extensive investigation of this highway program. Continued scrutiny of this multibillion-dollar highway program can prevent waste, inefficiency, and graft and maintain the public's confidence.

Rail. The nation's railroads are in particular need of freedom from burdensome regulation to enable them to compete effectively with other forms of transportation. We also support federal assistance in meeting certain capital needs particularly for urban mass transportation.

THE subject of atomic energy was presented in a seven-point program. It is interesting to note, in the light of these recommendations, that the British government only recently decided to cut back on its program for the production of electric energy from atomic sources. The platform states:

Atomic energy. The United States became pre-eminent in the development of atomic energy under Democratic administrations.

The Republican administration, despite its glowing promises of "Atoms for Peace," has permitted the gradual deterioration of United States leadership in atomic development both at home and abroad.

In order to restore United States leadership in atomic development, the new Democratic administration will:

1. Restore truly nonpartisan and vigorous administration of the vital atomic energy program;
2. Continue the development of the various promising experimental and prototype atomic power plants which show promise, and provide increasing

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support for longer-range projects at the frontier of atomic energy application;

3. Continue to preserve and support national laboratories and other federal atomic installations as the foundation of technical progress and bulwark of national defense;

4. Accelerate the Rover nuclear rocket project and auxiliary power facilities so as to achieve world leadership in peaceful outer space exploration;

5. Give reality to the United States international atoms-for-peace programs and to continue and expand technological assistance to underdeveloped countries;

6. Consider measures for improved organization and procedure for radiation protection and reactor safety, including strengthening the rôle of the Federal Radiation Council, and the separation of quasi-judicial functions in reactor safety regulation;

7. Provide a balanced and flexible nuclear defense capability, including the augmentation of the nuclear submarine fleet.

DURING the past year the regulatory agencies have been in the spotlight and have been the recipients of adverse criticism from both the press and Congress. The Democratic plank regarding these agencies states:

The Democratic party promises to clean up the federal regulatory agencies. The acceptance by Republican appointees to these agencies of gifts, hospitality, and bribes from interests under their jurisdiction has been a particularly flagrant abuse of public trust.

We shall bring all contacts with commissioners into the open, and will protect them from any form of improper pressure.

We shall appoint to these agencies men of ability and independent judgment who understand that their function is to regulate these industries in the public interest.

We promise a thorough review of existing agency practices, with an eye toward speedier decisions, and a clearer definition of what constitutes the public interest.

The Democratic party condemns the usurpation by the executive of powers and functions of any of the independent agencies and pledges the restoration of the independence of such agencies and the protection of their integrity of action.

ONE of the longest sections of the platform was devoted to fiscal responsibility. Quoted below is the third recommendation under the heading of "fiscal responsibility":

Third, we shall close the loopholes in the tax laws by which certain privileged groups legally escape their fair share of taxation.

Among the more conspicuous loopholes are depletion allowances which are inequitable, special consideration for recipients of dividend income, and deductions for extravagant "business expenses" which have reached scandalous proportions.

Tax reform can raise additional revenue and at the same time increase legitimate incentives for growth, and make it possible to ease the burden on the general taxpayer who now pays an unfair share of taxes because of special favors to the few.

ALL in all the liberal tone of the Democratic platform indicates the thinking of the party leaders. While it is

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"NEVER THOUGHT I'D BE GIVING CURB SERVICE!"

acknowledged by most observers that the majority of the proposals contained in this document will never see the light of day—as regards practical application—they still are straws in the wind indicating the present mood of the Democratic party.

The GOP Platform

As might be expected, the Republican platform switched all the rôles and the Democratic "heroes" became the Republican "cattle rustlers." Both parties exhibited great concern over their respec-

tive defense and civil rights planks. This seems to be a good indication that our national defense will be one of the major debating points during the election campaign. Once again at the Republican convention a number of important issues took back seats because of the fight over the civil rights plank.

The Republican natural resources plank was worked out under the chairmanship of Representative Laird (Republican, Wisconsin). It states:

A strong and growing economy re-

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quires vigorous and persistent attention to wise conservation and sound development of all our resources. Teamwork between federal, state, and private entities is essential and should be continued. It has resulted in sustained conservation and resource development programs on a scale unmatched in our history.

The past seven years of Republican leadership have seen the development of more power capacity, flood control, irrigation, fish and wild-life projects, recreational facilities, and associated multipurpose benefits than during any previous administration in history. The proof is visible in the forests and waters of the land, and in Republican initiation of and support for the upper watershed program and the Small Reclamation Projects Act.

It is clear, also, in the results of continuing administration-encouraged forest management practices which have brought, for the first time, a favorable balance between the growth and cutting of America's trees. Our objective is for further growth, greater strength, and increased utilization in each great area of resource use and development.

We pledge: Use of the community watershed as the basic natural unit through which water resource, soil, and forest management programs may best be developed, with interstate compacts encouraged to handle regional aspects without federal domination.

Development of new water resource projects throughout the nation.

Support of the historic policy of Congress in preserving the integrity of the several states to govern water rights.

Continued federal support for Republican-initiated research and demonstration projects which will supply

fresh water from salt and brackish water sources.

Necessary measures for preservation of our domestic fisheries.

Continued forestry conservation with appropriate sustained yield harvesting, thus increasing jobs for people and increasing revenue.

Observe the "preference clause" in marketing federal power.

Support of the basic principles of reclamation.

Recognition of urban and industrial demands by making available to states and local governments, federal lands not needed for national programs. . . .

Completion of the "Mission 66" for the improvement of national park areas as well as sponsorship of a new "Mission 76" program to encourage establishment and rehabilitation of local, state, and regional parks to provide adequate recreational facilities for our expanding population.

Continued support of the effort to keep our great out-of-doors beautiful, green, and clean.

Establishment of a citizens' board of conservation, resource, and land management experts to inventory those federal lands now set aside for a particular purpose; to study the future needs of the nation for parks, seashores, wild-life, and other recreational areas; and to study the possibility of restoring lands not needed for a federal program.

Minerals, metals, fuels, also call for carefully considered actions in view of repeated failure of Democratic-controlled Congresses to enact any long-range minerals legislation. Republicans, therefore, pledge:

Long-range minerals and fuels planning and programming, including increased coal research.

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Assistance to mining industries in bridging the gap between peak defense demands and anticipated peacetime demands.

Continued support for federal financial assistance and incentives under our tax laws to encourage exploration for domestic sources of minerals and metals, with reasonable depletion allowances.

To preserve our fish and wild-life heritage, we pledge:

Legislation to authorize exchange of lands between state and federal governments to adapt programs to changing use and habits.

Vigorous implementation of long-range fish and wild-life programs.

As with the Democratic platform, the Republicans included the following plank relating to minimum wages:

Republican action has given to millions of American workingmen and women new or expanded protections and benefits, such as:

Increased federal minimum wage;

Extended coverage of unemployment insurance and the payment of additional temporary benefits provided in 1958-59;

Improvement of veterans' re-employment rights;

Extension of federal workmen's compensation coverage and increase of benefits;

Legislative assurance of safety standards for long-shore and harbor workers and for the transportation of migratory workers; and an increase of railroad workers' retirement and disability benefits.

Seven past years of accomplishment, however, are but a base to build upon in fostering, promoting, and improving

the welfare of America's workingmen and women both organized and unorganized.

We pledge, therefore, action on these constructive lines:

1. Diligent administration of the amended labor management relations act of 1947 (Taft-Hartley Act) and the labor management reporting and disclosure act of 1959 (Landrum-Griffin Act) with recommendations for improvements which experience shows are needed to make them more effective or remove any inequities.

2. Correction of defects in the welfare and pension plans disclosure act to protect employees' and beneficiaries' interests.

3. Upward revision in amount and extended coverage of the minimum wage to several million more workers.

4. Strengthening the unemployment insurance system and extension of its benefits.

5. Improvement of the eight-hour laws relating to hours and overtime compensation on federal and federally assisted construction, and continued vigorous enforcement and improvement of minimum wage laws for federal supply and construction contracts.

In the field of economic growth and business, the Republicans went on record as favoring the following:

1. Broadly based tax reform to foster job-making and growth-making investment for modernization and expansion, including realistic incentive depreciation schedules.

2. Use of the full powers of government to prevent the scourges of depression and inflation.

3. Elimination of featherbedding practices by labor and business.

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4. Maintenance of a stable dollar as an indispensable means to progress.

5. Relating wage and other payments in production to productivity—except when necessary to correct inequities—in order to help stay competition at home and abroad.

6. Spurring the economy by advancing the successful Eisenhower-Nixon program fostering new and small business: by continued active enforcement of the antitrust laws; by protecting consumers and investors against the hazard and economic waste of fraudulent and criminal practices in the market place; and by keeping the federal government from unjustly competing with private enterprise upon which Americans mainly depend for their livelihood.

7. Continued improvement of our vital transportation network, carrying forward rapidly the vast Eisenhower-Nixon national highway program and promoting safe, efficient, competitive, and integrated transport by air, road, rail, and water under equitable, impartial, and minimal regulation directed to those ends.

IN concluding the Republican platform, the following statement was made:

We have set forth the program of the Republican party for the government of the United States. We have written a party document, as is our

duty, but we have tried to refrain from writing a merely partisan document. We have no wish to exaggerate differences between ourselves and the Democratic party; nor can we, in conscience, obscure the differences that do exist. We believe that the Republican program is based upon sounder understanding of the action and scope of government. There are many things a free government cannot do for its people as well as they can do them for themselves. There are some things no government should promise or attempt to do. The functions of government are so great as to bear no needless enlargement. We limit our proposals and our pledges to those areas for which the government of a great republic can reasonably be made responsible. To the best of our ability we have avoided advocating measures that would go against the grain of a free people.

THese then are selections from the two major platforms which have special interest for the public utilities. They are the ground rules for the coming battle for the presidency. Indications are that Kennedy and Nixon will engage in open TV debates, much in the style of the great debates of the last century. Although national defense and civil rights received most of the attention at the conventions, these other planks are sure to receive the candidates' attention in the next few months.

National Fuel Gas Company Outlook

STUART H. NICHOLS, president of the National Fuel Gas Company, recently spoke to the New York Society of Security Analysts outlining National Fuel's present situation and the outlook for the

future. Mr. Nichols related that a few years earlier he had attended a meeting of the security analysts as the president of the Iroquois Gas Corporation of Buffalo and that one of the speakers was

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a representative of the National Fuel Gas Company. He stated that a late arrival at that meeting inquired who the speaker was, and when advised that it was a representative of National this gentleman stated, "Wouldn't you know it! I'm not interested in National Fuel Gas Company, it's too conservative."

Mr. Nichols indicated that this incident had brought home the fact that very little had been done in passing along information about the company's progress to investors and their representatives. He noted that today, when the competition for the investor's dollar is keen, the work that must be done in this area of informing the public is obvious.

A detailed outline of National's financing policy was given and then Mr. Nichols moved on to the field of expected company expansion and growth potential. He stated that the Buffalo metropolitan area, including Niagara Falls, is the ninth fastest-growing area in the United States. Contributing to this growth are such things as the recently completed St. Lawrence seaway, the New York thruway, the surrounding railroad network, and the International airport. He noted the fact that over half of the population of the United States lives within 500 miles of the Buffalo area and that 70 per cent of Canada's population lives within the same radius. Among the advantages of the area are adequate electric power, availability of industrial gas at competitive rates, and a stable labor force. Such industries as General Motors, Ford, DuPont, Union Carbide, Westinghouse, General Electric, and Bethlehem Steel have vast operations in the area, he noted.

ALTHOUGH Mr. Nichols stated that the future of the area is optimistic, he believes that it would be gloomy if the company was not also in an excellent

position to promote additional use of gas by existing customers. He noted that because of gas storage "right in our back yard," the company could buy gas at high load factors, enabling the sale of peak gas in the wintertime at relatively low cost.

NIChOLS emphasized that expanded use of gas for space heating and water heating could add to the potential load and that many customer appliances using gas were just in their beginning sales stages. Among the appliances for which Mr. Nichols forecast a bright future were gas clothes dryers, refrigerators, patio lights, incinerators, and air conditioning. He stated:

These are all tools for growth with which we are working today, but we cannot overlook the importance of work now being done in research laboratories, which will most assuredly increase growth opportunities in the future. The free piston engine has now passed the experimental stage, and is putting the gas industry in a better position to compete for the lucrative air-conditioning load. Fuel cells and various thermoelectric devices are experimentally generating electric power directly from the energy stored in hydro carbons, much as a storage battery generates power directly from the chemical energy stored in its cells. Vast new markets for gas as an energy source would open up if any of these devices should be developed to a point where they could be mass produced in a compact, efficient, and simple form at a moderate price.

THE benefits derived by company expansion were discussed in relationship to the existing regulatory atmosphere. Mr. Nichols stated that two-thirds

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of National's revenues came from New York state customers while the other third was derived from residents in Pennsylvania. (A small portion is also derived from some 2,400 customers living in Ohio.)

RATE base in New York state is considered to be original cost depreciated, plus working capital, and a rate of return in excess of 6 per cent has recently been permitted in cases where companies take advantage of accelerated depreciation for income tax purposes. In Pennsylvania rate base is a trended original cost depreciated figure, plus working capital, and Mr. Nichols stated that a rate of return of between 6½ and 6¾ per cent is the general rule. It was Mr. Nichols' opinion that general opportunities for growth were better than average and that National would continue to earn as much for stockholders as "regulatory atmosphere" and the preservation of a sound company would permit.

Mr. Nichols indicated that for a number of years contacts with Consumers Gas Company of Toronto and Trans-Canada Pipe Lines had been made in an

effort to obtain Canadian gas. However, cost figures had been prohibitive and official governmental attitudes toward exportation of gas had been in doubt. Just recently, Mr. Nichols stated, things have become brighter with Trans-Canada's representatives acknowledging that prices must be in the same general area as prices for southwest gas. Then, too, the Canadian government has recently exhibited an increasingly friendly attitude toward gas exportation.

THE greatest problem now facing National, according to Mr. Nichols, is the lack of management man power. As with other gas companies, National has grown so rapidly that it has not had the time to develop the management talent needed. However, men are now in training and until such time as the company can become self-sufficient in this area, outside consultants and advisors will continue to be used. Mr. Nichols emphasized that the men now in training had a great deal of potential but that time was required before they could take over the areas which are now being covered by outside help.

"THE crucial battle of the day revolves around the concept of economic growth. Everyone is as much against economic doldrums as Calvin Coolidge's pastor was against sin. Everyone favors growth. The difference of opinion is over methods. One group relied on the traditional impetus of a high rate of savings invested in technological advance. The other has scant faith in private initiative. One group believes in voluntary private action in building a strong, free country; the other demands forced draft government programs stoked with taxpayers' money. This latter experiment has been tried before —here and abroad—and got a rejection slip. . . . Free enterprise in a free political system creates the key power thrust. It not only generates private growth, but it also provides all the revenues for government action—and eventually must pay all left-over government debts."

—FREDERICK H. MUELLER,
Secretary of Commerce.

The March of Events



AEC Extends Policy On Services

AN Atomic Energy Commission policy of performing neutron irradiation services in commission-owned facilities for commercial firms and private institutions under certain conditions was reaffirmed recently by the Hanford AEC office. The action was said to be in line with the AEC's general policy to reduce and eventually eliminate its sales and services in fields where industrial sources become reasonably available. Private facilities of varying degrees of capability are now available for commercial irradiations, and additional facilities are in prospect, a spokesman for the AEC said.

Neutron irradiation services from AEC facilities such as Hanford have been used by commercial concerns for radioisotope production, neutron irradiation of prospective fuel elements and reactor core components, and for testing various materials under pressures and temperatures occurring in an atomic reactor.

California Preparing Nation's Largest Gas Storage Field

PACIFIC GAS AND ELECTRIC COMPANY
will put in operation this November

Reclamation's Construction Program

SECRETARY of Interior Seaton has announced preliminary highlights of a \$294 million construction program to be carried out in fiscal 1961 by the Bureau of Reclamation. The Reclamation construction program in fiscal 1960 totaled \$206 million.

The program includes six new starts, resumption of work on the Ainsworth unit (Nebraska) of the Missouri river basin project, and continuing construction on 39 projects or units in the 17 western states.

Work also is contemplated on four continuing projects and five new projects to be carried on by irrigation districts or other local entities under the small loans program.

Additionally, work will continue on projects and units in the drainage and minor construction category and projects which are being rehabilitated under the rehabilitation and betterment program.

an underground natural gas storage field with the largest total reservoir capacity in the nation, PG&E Vice President and General Manager S. L. Sibley announced last month.

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The nearly depleted McDonald Island natural gas field in the San Joaquin river delta 10 miles northwest of Stockton is being developed into a gas storage reservoir by PG&E to help meet "peak-day" customer demands for gas, Sibley said. When completed in late 1961, the field will have a working storage capacity of 30 billion cubic feet of gas and a daily deliverability of 400 million cubic feet. A "cushion" of 54 billion cubic feet will remain in the field to maintain minimum pressure in the field and prevent water intrusion.

Initially, when the field goes into operation in November, PG&E will be able to deliver from it about 75 million cubic feet of gas daily.

Gas Rate Rise Approved

AN increase of \$12,026,000 a year in gas rates to be charged by Pacific

Lighting Gas Supply Company has been authorized by the state public utilities commission.

Pacific Lighting supplies gas to its affiliates, Southern California and Southern Counties Gas companies. These companies have rate increase applications pending before the state commission.

The new rates for Pacific will go into effect the day gas begins to flow through the 116-mile pipeline the company will construct from Newberry to Needles to tie in with the Transwestern Pipeline Company's line at that point.

The California section of the supply line will cost Pacific \$17 million, and this expense, plus higher taxes and wage costs, formed the basis on which the raise in rates was granted. The rate is calculated to bring the company 6½ per cent on its investment.

Florida

PUC Checks into Phone And Electric Rates

Two Florida utilities face an investigation of their rates by the Florida Railroad and Public Utilities Commission. The commission said local and long-distance rates of Southern Bell Telephone & Telegraph Company appear to be too high and should be cut. A similar announcement was made concerning the electric rates of Florida Power & Light.

The two commission orders resulted from a routine investigation required of the commission, which periodically re-

views rates to ascertain whether they are reasonable. Hearings for both utilities have been scheduled for September.

The commission disclosed that according to records in its possession it would seem to indicate that Florida Power & Light is earning at a rate in excess of 8 per cent while Southern Bell has an earnings rate exceeding 7 per cent.

Both companies face a possible reduction in their rates should the hearings confirm that their charges are in fact producing a rate of return deemed higher than it should be by the commission.

Kentucky

Court Rules City Can Still Push City-owned Power Plant

RECENTLY a suit which would have barred the city of Glasgow, Kentucky, from making further efforts to establish a

municipally owned power distribution system was rejected by Special Circuit Court Judge Thomas F. Manby. The suit was filed by Kentucky Utilities Company and seven taxpayers.

THE MARCH OF EVENTS

Judge Manby ruled that all previous actions by the city's electric plant board were legal and that the city had a perfect right to ask its voters to decide again this November whether they wanted a municipally owned power distribution system financed with revenue bonds. Should

the city win the election for the power system, it would still be faced with time-consuming legalities incident to condemning Kentucky Utilities' facilities, inasmuch as the utility has refused to negotiate a sale, declaring no price would be satisfactory.

Michigan

Work on A-power Plant Speeded

ORDERS to speed work on the unique nuclear reactor Consumers Power Company will build at Big Rock Point near Charlevoix were issued last month by James H. Campbell, president of the electric and gas utility. He said every effort would be made to get the principal structures under roof before the end of the short summer season.

At a press conference attended by science writers and members of the staffs

of technical publications, emphasis was placed on the fact that this so-called "boiling water reactor" is not expected to compete with coal-fired installations, perhaps for another quarter of a century.

It was also stressed that the \$27,762,000 central station is likely to become obsolete before it is completed, and that its maximum output is not expected to exceed 75,000 kilowatts of electricity, but the knowledge to be gained from its operation will prove invaluable in suggesting improved designs.

Mississippi

Gas Rate Boost Denied

THE Hinds county chancery court in July upheld the decision of the Mississippi Public Service Commission which denied a \$2.5 million increase in natural gas rates sought by United Gas Corporation.

The higher rates asked were put into effect under bond by United Gas on August 1, 1954, pending outcome of the rate case before the commission and the courts.

United Gas is expected to appeal the decision of the lower court to the state

supreme tribunal. In the event the commission is finally upheld by the supreme court, it will mean that United Gas will have to refund about \$8 million in excess revenues collected since 1954.

Since the commission denied the original rate increase application of United, several pipeline increases have been filed by the company with the Federal Power Commission, some of which have been passed along to consumers. It is estimated that rates now sought by United Gas amount to about \$2.5 million a year.

New York

Gas Rate Hike Allowed

NIAGARA MOHAWK POWER CORPORATION has been granted a rate in-

crease of \$1.8 million in its natural gas rates.

The public service commission re-

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jected the company's proposal for a \$3,940,000 increase, calling this amount excessive.

The commission said that the utility was not giving its 355,000 customers a "proper share of benefits resulting from income tax savings." A year ago the commission ruled that savings accruing to

a utility through depreciation and amortization provisions of federal tax laws must be shared with its customers.

In addition, the commission pointed out that Niagara based its proposal largely on abnormal 1959 expenditures for maintenance of mains and use of an unacceptable rate base.

Ohio

Rate Agreement Announced

IN what was regarded as a major victory for the city of Columbus, the city's utilities director announced an agreement with Ohio Fuel Gas Company for a 1½ per cent increase in the two years following next November 10th. Under the agreement, the rate from November

11, 1962, to November 10, 1964, would increase another 1½ per cent.

Ohio Fuel Gas had sought an 11 per cent increase in rates. The agreement was to be submitted to the Columbus city council for approval and submission to the voters at the November general election.

Texas

Severance Tax Appeal Hearing Set

THE state's appeal in a case testing the constitutionality of the 1959 natural gas severance beneficiary tax will be heard by the third court of civil appeals on November 30th. Travis County District Judge Roberts on June 24th declared the tax in violation of the commerce clause of the United States Constitution, which prohibits imposing an undue burden on interstate commerce.

The tax law, which took effect last September, was designed to bring the state \$7.5 million a year—much of it from pipeline companies that buy the gas in Texas and sell it out of state.

The November 30th setting represents preferential advancement of the state's appeal to expedite final determination of the suit, it was reported. Appeal is expected to be carried to the state supreme court and the U. S. Supreme Court, which

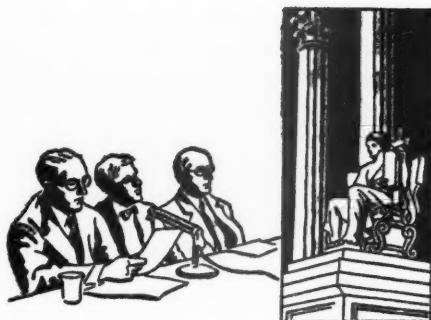
means the case may be fought to 1962.

Votes Gas Rate Hike

AN ordinance raising gas rates was recently passed by the Brazoria city council, the first in eight years. The new rates became effective on the July billing to city gas customers.

The city's engineer submitted a study on the increase needed to offset a recent cost hike on gas purchases provided in a new five-year contract signed with United Gas Company. Cost to the city was raised from 19 cents per thousand cubic feet to 24½ cents per thousand cubic feet.

The new schedule does not affect the minimum rate of \$1.50 for the first 500 cubic feet of gas used by customers. The new rate, as adopted, will be 95 cents per thousand cubic feet for users consuming from 500 to 3,500 cubic feet, 90 cents from 3,500 to 6,000 cubic feet, and 75 cents from 6,000 to 10,000 cubic feet.



Progress of Regulation

Trends and Topics

Exclusion of Customer-owned Property from Rate Base

CUSTOMERS' appliances and other property are not includable in the rate base of a public utility company. This would seem to be self-evident, but under some circumstances, when a company has made an investment, questions as to inclusion have arisen. Thus, in a recent case before the North Carolina commission, a gas company sought to include in the rate base the unamortized amount of its expenditure to modify appliances upon conversion from manufactured to natural gas.

The commission refused to include this amount "since no title to these customer properties vests in the company," and they could not be said to be part of its utility plant. Moreover, the ratepayers were "replacing the full amount as a nonrecurring expense," since the company was amortizing conversion cost as an operating expense (33 PUR3d 398).

The Federal Power Commission excluded from the rate base of Pennsylvania Water & Power Company (Penn Water) expenditures made in connection with a transmission line which was the property of a "customer company." Penn Water had paid for surveys with respect to its own construction of the line but abandoned the project. Later Edison Electric Company built the line. Penn Water made expenditures in assisting the customer company to build the line, for which the customer was never charged. As a result of the transactions Penn Water "acquired no property or facilities" (82 PUR NS 193).

Claim of Ownership as a Factor

A federal court held that no deduction should be made for service pipes laid on consumers' property, inside the building line, on the theory that some customers had contributed part of the cost, where no testimony was presented to prove customer ownership (PUR1926A 412). A similar decision was made by the California commission (PUR1918A 506).

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But where it was shown that service connections were paid for and owned by customers they have been excluded (PUR1927B 400).

The Illinois commission excluded rural lines and meters not owned by an electric company, but included meters as to which customer claims of ownership were unsubstantiated (PUR1922B 346).

Equity Factor

The question of fairness arises in some cases, as in a Virginia case in which the decision was in favor of customers. Applying the same reasoning, fairness might favor a utility in another case.

The Virginia commission, in excluding service extensions paid for by customers, discussed the applicable principles at some length. It was said that inclusion "may depend upon ownership" and that title to property is not always vested in the person who paid for it. In the words of the commission, "equity will demand that certain property to which the utility has no title should be included and certain other property to which the utility has title should be excluded." The commission concluded in this case that service connections, paid for by consumers, should not be included, "irrespective of the question of ownership" (3 PUR NS 61).

Water pipes laid by consumers at their own cost were, in a case before the Pennsylvania commission, included in the rate base, notwithstanding the general rule that lines laid by customers may not be included. The company had assumed responsibility for maintenance and had taken possession under rental arrangements. Many lines would have to be replaced by the company. The commission said it did not intend to depart from the general rule as to exclusion approved in previous decisions (PUR1916E 962, PUR1924C 680, PUR1925B 290, PUR1930D 198), but it cited one previous case (PUR1926D 80) as a precedent for its decision here (6 PUR NS 249).

Review of Current Cases

Telephone Rate Decision Looks to Earnings Requirement And Rejects Fair Value and Economic Depreciation

THE Kansas commission has granted Southwestern Bell Telephone Company a rate increase expected to produce \$1,321,437 in additional gross revenues annually. The company had requested an additional \$5.8 million. Southwestern Bell is wholly owned by American Telephone and Telegraph Company.

Average Original Cost Adopted

Southwestern Bell urged that the rate

of return be based on the fair value of its property devoted to service in Kansas. Fair value of from \$205 million to \$213 million was claimed, taking into consideration original cost of approximately \$149 million, trended original cost of about \$189 million, and reproduction cost of \$237 million, together with materials and supplies, construction work in progress, working capital, and other factors of from \$4 million to \$12 million.

PROGRESS OF REGULATION

The commission considered average original cost less depreciation as the most acceptable basis for rate-making purposes, pointing out that it was taken directly from the company's books and records, eliminating speculation and individual judgments inherent in the other methods of valuation. "There is no need of opening 'Pandora's box' of imponderables and judgment factors," said the commission.

Average original cost was fixed at about \$145 million, allowing for materials and supplies, but excluding cash working capital (amply supplied from tax accruals) and construction in progress. The factor of inflation would be considered in the determination of rate of return. In any event, the real question, in the commission's view, was not the value of the property but how much money the company was entitled to earn. The amount allowed should be sufficient to compensate the company for the services performed and to yield a fair return to the investors for the capital they supply.

"Economic Depreciation" Ruled Out

The applicant contended that it should be allowed depreciation expense based on the economic depreciation theory; that is, depreciation expense based on current dollars. Depreciation on original cost was insufficient to replace plant, it was argued.

In no event, said the commission, should a utility be permitted to recover in depreciation expense a total amount in excess of original cost. The theory was said to be unsound and productive of inequitable results. Changing price levels would require variations in the annual accrual, based on conjecture. In effect it would require the ratepayer to provide, in periods of rising prices, capital contributions and sustain alone the effects of inflation. A particularly inequitable burden would fall upon the ratepayers by reason

of the income tax laws, which do not recognize current cost depreciation as an allowable expense. The company would have to collect \$2.12 for every one dollar charge over and above the depreciation allowance based on the cost of property.

Capital Structure Affects Ratepayers

If the interests of subscriber and investor are to be properly balanced in the determination of a fair rate of return, it is necessary to determine a prudent capital structure, the commission pointed out. The capital structure has a direct impact upon the cost of utility services. Each dollar of interest paid to the bondholders costs the ratepayers only one dollar, while each dollar made available to the equity holder costs the ratepayer \$2.12 as a consequence of the federal income tax laws. Furthermore, the cost of debt capital to the company is substantially less than the cost of equity.

Southwestern Bell urged the commission to accept its present debt ratio of about 20 per cent, contending that capitalization is a matter within the province of management. Instead, the commission adopted the debt ratio of the applicant and its parent, 33.97 per cent, for rate-making purposes, though it found that a debt ratio of 45 to 50 per cent would be prudent for Southwestern Bell. The commission suggested that, by financing future expansion with debt capital, the company can materially improve its return to the equity holders above and beyond the return allowed in this rate proceeding.

Capital Cost

In arriving at the cost of debt capital to Southwestern Bell, the commission's consideration of the cost of debt to the parent had the effect of reducing the composite cost to the subsidiary. The embedded cost on existing debt was used, along

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with the full incremental cost on additions to debt.

Where there is no market price for the stock of an operating company, because it is held by a parent corporation, said the commission, the earnings-price ratio and the dividend pay-out ratio of the stock of the parent or of similar system operating companies whose stock is traded must be considered. The elements of risk, including the effect of inflation, are reflected in market price. The cost of equity capital to Southwestern Bell was found to be between 8.4 and 8.6 per cent.

Offering comparisons with industrial companies, one witness for the applicant contended for a rate of return of 9 to 10 per cent on a net investment rate base, or 7 per cent on fair value. There was no showing, however, that the substantial number of industrials selected were comparable. A telephone company is not entitled either in fact or in law, the commission declared, to compare its earnings with those of industrials, for the utility has no constitutional right to profits such as are realized or anticipated in highly profitable enterprises or speculative ventures.

A rate of return of 6.59 per cent on the original cost rate base was allowed. This will permit the company substantially to recoup the embedded cost of existing debt capital and earn 8.55 per cent on invested equity capital. No allowance was considered necessary for inflation since it is reflected in the cost of capital as a result of investor expectations as to the future.

Among other things considered by the commission in determining a fair rate of return were benefits accruing to the applicant by way of a license contract with the parent corporation, a present rate of

return of about 9 per cent earned by Western Electric (Southwestern Bell's supplier and subsidiary of the American Company), and procedures used in the allocation of plant between intrastate and interstate operations.

Taxes and Other Matters

The company was authorized to place the burden of individual franchise taxes directly upon subscribers who receive the benefits of them. Treating such taxes as a general expense was held to be discriminatory as to other subscribers in service areas which either impose no such tax or exact a proportionately smaller tax. Southwestern Bell was allowed, as an expense, the amount of income taxes actually incurred as a result of its operations during the test period, giving effect to the interest cost of debt allocable to its state operations.

Because of extreme fluctuations in the annual amounts of storm repairs, the company's rate-making expense for this item was determined by analyzing the casualty repairs over the preceding twenty years and relating it to the number of units of plant exposed. The appropriate average cost per unit of exposure was applied to the number of units exposed at the end of the test period. By simple multiplication a normalized expenditure for casualty repairs was projected to each item of exposed plant. An allowance was added for major natural catastrophes of the nature of floods.

The commission approved the "Metropolitan Plan" for rates in the greater Kansas City area, whereby this urban territory would be divided into a central zone and first and second tier zones or service areas. *Re Southwestern Bell Teleph. Co. Docket No. 60,800-U, May 27, 1960.*

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Federal Jurisdiction over Commingled Gas

THE Kentucky appeals court ruled that natural gas sold by a producer direct to interstate pipelines and commingled with other gas destined for out-of-state consumption would be considered to move entirely in interstate commerce even though some of it was actually distributed to local purchasers. Sole jurisdiction over the producer is in the Federal Power Commission. In making this decision, the court followed the Deep South case (20 PUR3d 469). The controversy arose when the state commission directed Columbian Fuel Corporation, the appellant, along with other producers, to show cause why they should not be required to supply gas to a particular distributing company within the state.

The court was unable to distinguish the Deep South case from the instant proceeding. Actually, it was pointed out, Deep South sold to a processing company which, in turn, resold to a distributing company, whereas Columbian sold directly to pipeline systems admittedly engaged in interstate commerce. Deep

South's sales were farther removed from the ultimate consumer than those of Columbian. But the same general principle governs in both cases, said the court. Since Columbian's output was commingled with other gas, the vast bulk of which was destined for consumption beyond the confines of the producing state, the conclusion was inescapable that all of its gas moved in interstate commerce.

It was of no consequence that some of Columbian's gas was distributed to purchasers in the state. The Natural Gas Act, nevertheless, vests control over Columbian in the Federal Power Commission. The commerce clause of the Constitution admits of no divided authority in the federal regulatory field, the court declared. Wherever interstate and intrastate transactions of carriers are so related that the government of the one involves the control of the other, it is Congress, and not the state, that is entitled to prescribe the final rule. *Columbian Fuel Corp. v. Kentucky Pub. Service Commission et al.* 333 SW2d 945.



Proof of Pipeline Supply Not Essential In Gas Certificate Case

IT is beyond the authority of the state commission to require proof of a binding contractual obligation on the part of a pipeline company to extend its line into a new area, as a condition precedent to the issuance of a certificate to a gas distributing company proposing to serve that area and requiring pipeline supplies for the purpose, the Idaho supreme court held. The court reversed a commission order which denied a certificate to two rival applicants on the principal ground that no such extension had been provided for.

The Federal Power Commission has authority to require a pipeline extension in a proper case. But an applicant for an interconnection is not considered by the federal agency to be a qualified applicant if it does not already have a state certificate authorizing its proposed service. Only if it has such state authority may it obtain an extension order from the Federal Power Commission. Therefore, said the court, the commission was in error in denying certification on the ground that no showing was made that the pipeline would extend its line.

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Testimony by Commissioner

Another notable aspect of the decision concerned evidence presented by a commissioner and relied upon in the determination of the case. Each applicant had represented that it had an understanding or contract with the pipeline company to extend that pipeline to the area proposed to be served. One commissioner, however, had been privately informed by the president of the pipeline that no extension would be made. This commissioner became a witness and testified to the information which he had obtained. The applicants were then given an opportunity to present further evidence, which they declined. Both applications were subsequently denied, mainly on the basis of this testimony by the commissioner.

While a commission is not bound by the strict rules of evidence which govern courts of law, its findings must, nevertheless, be supported by substantial and competent evidence—not hearsay evidence. In a case such as this, said the court, where a commissioner has personal knowledge of facts pertinent to the decision to be reached, he has a duty to put such facts into the record. But the parties affected must be given an opportunity to test the accuracy of the evidence. Although the commission gave the parties an opportunity to offer further evidence, the evidence presented by the commissioner was hearsay, the court declared, and the manner of its presentation afforded the appellants no opportunity for cross-examination. *Re Citizens Utilities Co. et al.* 351 P2d 487.



Would-be Intervener's Right to Review

THE New York commission, a would-be intervenor in natural gas certificate cases before the Federal Power Commission, put before a federal appeals court the problem whether a petitioner for intervention in proceedings under the Natural Gas Act must petition for review of an order denying intervention, or whether the petitioner may later obtain review of the final order on the merits, raising at that time the question of its right to intervene.

Section 19(b) of the Natural Gas Act, controls the right to judicial review. It provides that any party to a proceeding aggrieved by an order may obtain a review in the court of appeals by filing a petition within sixty days after the order upon an application for rehearing. The problem may be stated in three parts: (1) Whether a would-be intervenor is a party to the proceeding when he has filed an application to intervene and his

application has been denied; (2) whether he has been aggrieved by the denial; and (3) whether he remains a party to the proceeding until after the final order on the merits and is further aggrieved by that order if it be adverse to his interests.

A would-be intervenor, the court indicated, is a party to the proceeding in a particular and peculiar, limited sense. When his application to intervene is denied, he is aggrieved in the sense that his right to represent his interests before the commission has been finally determined. Thus, the New York commission had a right to file a petition for review of the commission's order which denied intervention and reconsideration. But the statute limited the filing period to sixty days. Failure of the state agency to exercise its right within this period was not rectified by a later renewal of its application to intervene, after the commission's decision on the merits, and by its

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petition to review the rejection of the renewed application.

A would-be intervenor whose application to intervene has been denied is not a party to the full proceeding upon the merits and is not aggrieved at the time of the final order upon the merits. The court, therefore, dismissed the state commission's petition for review in this instance.

In another proceeding the state commission filed for review of a denial of intervention and reconsideration on the sixtieth day following the commission's order. After this petition, thus properly filed, the commission proceeded with the matter and issued a final order on the merits. Upon denial of an application for reconsideration of this latter order, the state commission also petitioned for review of it. The two petitions were consolidated.

In this matter the basic problem before the court was whether the federal body's final action on the merits and the termination of the proceeding rendered moot a prior-filed petition to review the intermediate order denying intervention, thus precluding judicial review of the denial. The court was of the opinion that, since the petition to review the intermediate order was properly brought, it

could not be mooted by any action of the federal commission. The jurisdiction of the court could not be destroyed by final administrative action in the proceeding, the would-be intervenor being absent from that proceeding.

From the premise that the proper time for petitions to review denials of intervention is within the statutory period of sixty days after the order of denial, said the court, it follows that the petition to review the final order does not present for decision the right of the New York commission to intervene.

The court explained that if it should finally be decided that the New York commission should have been allowed to intervene, the proceeding before the commission will have to be reopened to enable the state agency to participate, thus rendering moot the petition to review what was issued as the final order. If, on the other hand, it should be decided on the merits that the would-be intervenor had properly been denied intervention, its petition to review would not properly be before the court since the state commission would not be either a party to the proceeding or aggrieved by the final order. *New York Pub. Service Commission v. Federal Power Commission*, No. 15365 et al. April 28, 1960.



Original Cost of Adapted Plant Rejected

THE Pennsylvania commission, in denying a steam-heating company a rate increase, took exception to the company's estimate of original cost. The plant had originally been constructed by an electric company and had been operated for the primary purpose of generating electric current. As an incident or by-product of generation, the predecessors sold excess and exhaust steam for heating

purposes. When the present company acquired the plant, it had been adapted and dedicated exclusively to production and distribution of steam for heating purposes.

Therefore, the commission refused to accept a determination of original cost upon calculations of the original cost prior to acquisition from the electric utility. It held that the original cost should

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not exceed the acquisition cost at the time of the adaptation and dedication solely to the production and distribution of steam, plus the cost of plant installed thereafter and less depreciation accrued thereon.

This measure of value was then considered, together with the decline in the value of the dollar and the recognition that the company was a going concern, in determining the fair value rate base. The currently earned return of 6.42 per cent was deemed reasonable, necessitating denial of the proposed increase.

Cash Working Capital

No allowance was made for cash working capital. Unrefunded consumers' deposits supplied a substantial portion of the company's cash requirements. In addition, the company had an arrangement with its largest coal supplier under which payments were deferred to some extent.

In arriving at the materials and supplies allowance, the commission excluded a hauling charge from the stockpile to the boiler plant and depreciation charges relative to certain coal-conveying equipment. Such charges were assignable to operating expenses and depreciation expense.

Management Fees

The steam company was an operating subsidiary, and paid its parent company a management fee which the commission held was greatly in excess of the pro rata share of the actual cost of the services. A considerable portion of the management fees represented profit or return to the parent. Of the 20-cent fee, 12 cents represented profit before income taxes and 6 cents after.

It was apparent to the commission that the company's parent utilized the fee not only for the purpose of recovering the cost of services, but at the same time

deriving a continuing cash yield on its investment in operating affiliates, since it received no cash dividends as such. Amounts determined by the commission to be in excess of the pro rata share of reasonable operating expenses of the parent were disallowed.

Life Insurance

The commission rejected the company's claim for the cost of insurance on the life of the president of the company. The corporation was the beneficiary under the terms of the policy. Therefore, the commission noted, proceeds which might ultimately be realized from the insurance would accrue primarily to the benefit of stockholders, with no discernible benefit to the officer involved or the ratepayers.

This type of insurance differed from group life insurance on employees. In the group policies, the commission pointed out, employees designate the beneficiary and premiums paid by the company are considered in the nature of additional compensation to the employees as a fringe benefit related to their employment.

Extraordinary Renewals and Replacements

The commission also rejected the company's claim for extraordinary renewals and replacements. The amount claimed stemmed from a book loss which had developed from abandonment of property that had been underdepreciated. There was also a book profit on the sale of a motor vehicle that had been overdepreciated. Both were nonrecurring transactions.

Fuel Adjustment Clause

The company sought to include internal handling and hauling expense in its fuel adjustment clause. The commission held

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that the clause was designed primarily to allow utilities to recoup significant increases in the delivered cost of coal currently, in order to obviate frequent filing of new tariffs. It was never intended to permit utilities to recover expenses associated either directly or indirectly with internal handling or hauling of fuel. The

recovery of such internal expenses is a function of regular service rates, said the commission, and, therefore, does not come within the scope of the fuel adjustment clause. *Pennsylvania Pub. Utility Commission et al. v. Scranton Steam Heat Co.* C 17206, C 17189, C 17203, April 28, 1960.



Operational Safety Must Be Determined before Construction Permit for Nuclear Reactor May Issue

THE federal appeals court for the District of Columbia circuit ruled that the Atomic Energy Commission must find that a proposed nuclear power reactor can be safely operated, before the commission may authorize construction of the plant. The court set aside an order which continued in effect a construction permit issued in 1956 to the Power Reactor Development Company, holding insufficient the commission's findings as to safety.

This company, a membership corporation, was organized to study, develop, and operate a nuclear power reactor for the generation of electrical energy. Fourteen of its twenty-one members are public utilities. The reactor would be the largest "fast-breeder" reactor in the United States. It would be constructed at Lagoona Beach, Michigan, on the shore of Lake Erie, 30 miles southwest of Detroit.

The construction authority had been made provisional to the extent that a license for the operation of the facility would not issue unless the commission should later find that the final design afforded reasonable assurance that the health and safety of the public would not be endangered. The commission had observed, however, that there was reasonable assurance that scientific programs then under way would develop sufficient data to justify the issuance of an operating license, and that the results of these

programs would be available before a ruling would have to be made on the operating aspect of the project.

Labor Unions Aggrieved

Review proceedings were brought by several labor unions which contended that the statutory findings as to safety had not been made and that the unions and their membership would suffer economic injury from the construction of the reactor at the proposed site. The court held that these petitioners were aggrieved by the order and, therefore, had standing to seek review, pointing out that "it is plainly probable, in a high degree, that if the construction permit stands PRDC will get an operating license and will operate."

Qualified Safety Finding Disapproved

Section 182 of the Atomic Energy Act provides that a license applicant shall provide information to enable the commission to find that the utilization or production of special nuclear material will provide adequate protection to the health and safety of the public. Section 185 provides that the applicant shall be initially granted a construction permit if the application is otherwise acceptable. Upon completion of construction and upon a finding that the facility will operate in conformity with the application, the applicant shall be is-

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sued a license if no good cause to the contrary appears.

It was undisputed that the commission, in authorizing operation, must find that there is reasonable assurance that the reactor may be operated at the proposed site without undue risk to the health and safety of the public. The court held that this finding must also be made before construction may be authorized. If it were not required as a condition to the issuance of a construction permit, said the court, the statute would not require the issuance of a license when the permitted construction is carried out. Moreover, the possibilities of harm are so enormous that any doubt as to what findings the act requires should be resolved on the side of safety.

The commission had found reasonable assurance "for the purposes of this provisional construction permit" that the proposed facility would be safe. It apparently relied upon the production of further proofs of safety prior to the issuance of an operating license after the completion of construction. This qualified finding, in the opinion of the court, did not meet the requirements of the statute.

The court recognized as a forceful consideration the commission's position that by proceeding with construction and further research simultaneously, rather than awaiting complete research and development results, the applicant would save several years in getting its reactor into operation. But the court pointed out that if enormous sums are invested without assurance that the reactor can be operated with reasonable safety, pressure to permit operation without adequate assurance will be great and may be irresistible.

Finding Inadequate As to Site

The court considered inadequate the findings that there was "reasonable assur-

ance that safe operation of the reactor will be as likely in that location as in any other location," that there was "reasonable assurance that the site is satisfactory from structural and underground water flow standpoints," that the site was not meteorologically disqualified, and that there were extensive safeguards against the inadvertent release of liquid contaminants. Studies on other aspects of the site were still in progress. Congress, said the court, intended that no reactor should, without compelling reasons, be located where it will expose so large a population to the possibility of nuclear disaster. No such compelling reasons were apparent to the court.

Dissent Passes Ultimate Safety

A dissenting judge thought there was no occasion at this point for the court to reach the issue of the ultimate safety of the proposed plant's operation since the commission had merely issued a provisional permit to build the plant, not to operate it. The plant cannot go into operation until the applicant meets the safety provisions of the act. The sole basis of challenge to the provisional construction permit, said the judge, is the future possibility that an operating permit will be unlawfully issued by the commission and that this supposedly creates an immediate threat of injury.

The dissenting judge inquired on what evidence the court could say, in effect, that the commission had made an unwise decision on the location of the plant. He indicated that the court had exceeded its review authority in questioning the investment of "enormous sums" in the construction of a reactor which it thought might not be operated. *International Union of Electrical, Radio, and Machine Workers, AFL-CIO et al. v. United States et al. No. 15271, June 10, 1960.*

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Erroneous Directory Listing

THE Missouri commission rejected, as too harsh and unreasonable, a subscriber's motion to have a telephone company publish a new directory after it had listed an attorney's number erroneously in two successive directories.

However, the company was directed to distribute with its bills a notice of error requesting the subscribers to make the cor-

rections in their directories. The company was also instructed to install, in the office of the corporation whose number was listed next to the attorney's name, a switch key for transferring all calls to the attorney when the corporation switchboard was unattended. *Wright v. General Teleph. Co. of Columbia, Case No. 14398, July 7, 1960.*



Telephone Company Not Deprived of Procedural Due Process by Certificate Grant to Another Company

THE Pennsylvania superior court held that the commission had not deprived General Telephone Company of procedural due process by including in an order granting a certificate to Wattsburg Telephone Corporation provisions restricting General's territory and reducing its service area.

Wattsburg, previously a co-operative association, had incorporated and applied to the commission for a certificate. General's protest was based on the ground that it possessed charter rights to serve the area in question. The commission had found that, with the exception of four subscribers, General had not rendered service within the area served by Wattsburg when it was a co-operative. The

commission concluded that General had no right of pre-emption.

Inherent in every application for a certificate, said the court, is the question of competition. In the instant case, if the court sustained General's contention, the commission would have to institute a separate complaint proceeding for the purpose of determining whether or not service in the disputed area should be non-competitive. Such circuitous procedure was not necessary, in the court's opinion. General had been apprised of the issues, had had full opportunity to be heard, and had not been denied due process. *General Teleph. Co. of Pennsylvania v. Pennsylvania Pub. Utility Commission et al. No. 274, June 15, 1960.*



Cutoff Date and New Construction Expenses

THE Indiana commission clarified confusion with respect to cutoff dates and pro forma operating expenses when it considered a motion to set aside a previous order authorizing a water company to increase its rates.

The commission stated it was entitled to determine a cutoff date for consideration of rate base as well as other questions where results might be speculative if

a date certain was not determined. In the instant case, the commission had determined such a cutoff date, and had excluded new construction not placed into operation prior to that date.

However, this did not mean that the commission could not allow the pro forma expenses arising from the construction, particularly where the new additions would be put into service in a very short

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time. To do otherwise, said the commission, would be wholly unrealistic and would make the commission guilty of knowingly authorizing a net operating income which the utility could never real-

ize. The additional depreciation and property taxes relating to the new construction could properly be deducted as an expense. *Re Indiana Water Corp.* No. 28233, April 8, 1960.



Eminent Domain Exercise for Nuclear Power Plant Transmission Line Affirmed

THE Pennsylvania superior court affirmed a commission order approving an electric company's right to exercise eminent domain in acquiring a right of way across a farm for the construction, operation, and maintenance of a high power transmission line from a helium-cooled nuclear power plant. The farm owner had contended that the company's proposed service was not necessary, and that the interconnection would not result in greater economy of operation. It was not a public service until its worth was proven, the landowner argued, and the extreme high cost of the nuclear fuel and helium, not to mention the initial high cost of the reactor itself, did not contribute to higher economy at the present time.

The record lent no support to these contentions, the court held. One of the principal considerations of public convenience and necessity is the need for integration of the bulk power transmission systems of the electric companies involved. It appeared that the interconnection would enable both electric systems to obtain greater economies of operation. Each system would be able to meet, adequately and safely, its varying and growing load demands, and maintain constant voltage, frequency stability, and reliability of service. There were no existing facilities to provide for the transmission of the initial block of power from the proposed nu-

clear generating station to distribution centers. There was also need for additional power supply routes in the event of a national emergency.

Right to Designate Route

The designation of the route for the line was a matter for determination by the company's management in the first instance, held the court, and its conclusion would be upheld unless shown to be wanton or capricious. The commission was not required to withhold approval merely because another route might have been adopted which would cause the property owner less damage or reduce the inconvenience to him in the operation of his property.

The contention that the nuclear power plant was not a proven safe power unit was negated by the Atomic Energy Commission's issuance of a license, which carried an implication that there were no unfavorable safety factors. The evidence showed that the route had been chosen after detailed investigation and mature consideration of all pertinent factors. The painstaking and thorough procedure in which the course of the route was determined negated any question of wanton or capricious action on the part of the company, and the commission had justifiably so found. *Stone v. Pennsylvania Pub. Utility Commission et al.* No. 276, June 15, 1960.



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Interim Rate Increase Supports Financing of Construction

THE California commission authorized California Interstate Telephone Company to establish an immediate interim rate increase in order to enable the company to maintain its service and proceed with a program to meet the need for service in a fast-growing territory. Only about half of the total interim increase requested was granted. The company will seek substantial additional revenues in regular proceedings.

California Interstate serves in excess of 24,000 telephones through twenty-four exchanges, twenty-two of which are in California and two in Nevada. It also operates extensive toll lines. Its depreciated plant has increased from nearly \$8 million in 1954 to approximately \$23 million in 1960. A further net increase in plant of 72 per cent is budgeted by early 1962.

Testimony indicated that current earnings were not sufficient to cover annual common stock dividends. If additional shares of common stock were sold under current earnings conditions, it would prejudice existing shareholders and result in a high cost of money. Nor can additional bonds be issued, because earnings are not sufficient under an existing bond indenture. Short-term borrowings, under

present bank arrangements, will be completely absorbed by the end of July, 1960, and such borrowings must be paid in full by the end of 1960. The commission found that California Interstate was in urgent need of interim rate relief.

New rates will raise a 4.44 per cent rate of return on exchange operations to about 6.2 per cent. Intracompany toll earnings of 2.11 per cent will also be improved. Other operations of the company appeared to be amply remunerative, and total California operations for the twelve months ending March 31, 1959, produced a 6.14 per cent return, according to a company exhibit. However, another exhibit showed estimates of a declining return for the next three years. As reasons for this anticipated decline, the company pointed to increasing costs of labor, materials, taxes, and heavy increases in plant in a high cost period.

The applicant did not show the results of its total California operations separated between intrastate and interstate operations. Such a study will be required for the establishment of final rates in this proceeding. *Re California Interstate Teleph. Co. Decision No. 60296, Application No. 42012, June 20, 1960.*

Other Recent Rulings

Inadequate Service. The Ohio commission denied a telephone company's request for additional time to decide whether to seek financing to improve service in a certain territory in so far as the request might restrict commission action with reference to the integration, merger, or other combinations of territory and facilities of companies in the territory and in

adjoining areas where the evidence showed that the company could not, by any acceptable method of reorganization and rehabilitation, expect to provide adequate service. *Re Brownville Teleph. Co. et al. No. 29,045, May 4, 1960.*

Contemplated Construction. The Massachusetts commission held that a water

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company's estimated capital improvement should not be included in the rate base since it did not constitute property used or useful in the business. *Re Housatonic Water Works Co.* DPU 13052, May 11, 1960.

Refusal to Serve. The New Jersey commission held that a telephone company may refuse to restore service once properly ordered disconnected unless a proper governmental official indicates that there is no objection to the restoration, and the commission will not pass on the propriety of the objection of such officials to the restoration of service, since the proper forum in which to test such a matter is a court of law. *Re New Jersey Bell Teleph. Co.* Docket No. 602-148, May 11, 1960.

No Contract. The Missouri commission held that a telephone customer's promise to pay arrearages on its account if service was restored did not constitute a contract binding upon the company since a promise to do what the promisor is already bound to do cannot be valid consideration. *Paolillo v. Southwestern Bell Teleph. Co.* Case No. 14,285, May 13, 1960.

Interest Coverage. A proposal by a gas company to issue a substantial amount of refunding mortgage bonds won approval from the District of Columbia commission where the company's pro forma debt ratio was only 44 per cent and its income was sufficient to cover interest requirements 5.8 times before income taxes and 3.2 times after income taxes. *Re Washington Gas Light Co.* PUC No. 3634, Formal Case No. 473, Order No. 4652, May 26, 1960.

Value for Public Acquisition. A pro-

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posed purchase price exceeding original cost of an electric company's facilities plus a sum covering certain cutoff costs or rearrangement of company facilities, loss of load, and idle plant resulting from the sale of the properties involved was adopted by the Missouri commission as the price to be paid for such facilities by a municipality which operated an electric plant and which had annexed the area served by the electric company. *Re Missouri Public Service Co.* Case No. 14,370, June 22, 1960.

Injunction Too Harsh. The U. S. court of appeals held that a temporary injunction issued against a partnership, restraining it from transporting coal in interstate commerce except as set forth in its certificate, was too harsh a remedy and should be stayed upon a showing that the issue of whether the partnership was entitled to broader authority was still undecided, the partners were not guilty of fraud or conscious wrongdoing in the sense that they were arrogantly defying governmental authority, but had simply gone on doing, after getting their certificate, what they had done before. *Interstate Commerce Commission v. Barron Trucking Co. et al.* 276 F2d 275.

Actual Miles Flown. The U. S. court of appeals held that an irregular air carrier which had been authorized to engage in the carriage of military personnel, like contracting for charter flights upon filing its tariff, was not estopped from charging, in accordance with its tariff, for miles actually flown, without reference to points of departure named in the bid, and notwithstanding that the carrier had specified, in its bid, both the place where the aircraft was to be based before flying to the point where passengers were to be picked up, and the point to which the air-

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craft was to be returned. *United States v. Associated Air Transport, Inc.* 275 F2d 827.

Equal Time. The U. S. court of appeals held that the appearance of a political candidate in his regular job of reporting weather news by radio and television did not constitute such use of facilities as to require the granting of equal time to the opposing candidate. *Brigham v. Federal Communications Commission*, 276 F2d 828.

Implied Finding. The U. S. court of appeals held that a CAB finding that public convenience and necessity required amending an air carrier's certificate to permit nonstop service included, by implication, a finding that the public benefits from the additional service would outweigh any adverse effects on competitive carriers. *Braniff Airways, Inc. v. Civil Aeronautics Board et al.* 277 F2d 334.

Not Reviewable. The U. S. district court held that the ICC's refusal to suspend a tariff schedule was not reviewable by the court, but that the protestant had another remedy by way of a commission investigation of unjust discrimination and, if the commission so found, the right to ask permission to prescribe the rate to be charged. *Bison Steamship Corp. et al. v. United States et al.* 182 F Supp 63.

Incidental Service. The U. S. district court held that authorization of piggy-back service within the terminal area of a railroad could not be construed as an extension of the railroad's operating rights requiring a certificate, but had to be construed as a bona fide terminal-area collection-and-delivery service, performed within the confines of existing operating rights, and incidental to such rights. *Long*

Island R. Co. v. Delaware, L. & W. R. Co. et al. 183 F Supp 319.

Showing of Inadequacy. The Colorado supreme court held that no finding of public convenience and necessity for common carrier services is justified in the complete absence of some showing that there is inadequacy of service offered by common carriers already serving the area. *Denver & R. G. W. R. Co. v. Colorado Pub. Utilities Commission*, 351 P2d 278.

Monopolistic Rights. The Idaho supreme court, in upholding the commission grant of a household goods transportation permit, pointed out that the protection of existing carriers from additional competition is not a duty charged to the commission under a statute which recognizes the public interest as involved in such a permit grant. *Re Bermensolo*, 352 P2d 240.

Restitution Unwarranted. The Illinois appellate court held that a carrier could not maintain a suit for damages by way of restitution against another carrier which had been operating along the same route pursuant to a certificate that had been voided by the supreme court. *Illini Coach Co. v. Illinois Highway Transp. Co.* 166 NE2d 161.

Long-haul Protection. The U. S. district court held that a railroad jointly controlled by two other railroads, neither of which individually controls the third railroad, constitutes management and control within the long-haul protection of § 15(3, 4) of the Interstate Commerce Act. *Chicago, M., St. P. & P. R. Co. et al. v. United States et al.* 182 F Supp 81.

Municipal Water Extension Contract. The Massachusetts supreme judicial court

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held that a municipality has authority, pursuant to statute, to make a contract with a water company for the installation of extensions to the town water system, with the town to supplement the rates paid by customers in order that the company earn a specified return. *Salisbury Water Supply Co. v. Town of Salisbury*, 167 NE2d 320.

New Bridge. The Missouri supreme court held that the commission had not abused its discretion in directing the construction of a new bridge to replace a deteriorated one over railroad tracks, and in allocating one-third of the cost to a city and the remainder to the railroad. *Missouri ex rel. Chicago, B. & Q. R. Co. v. Missouri Pub. Service Commission et al.* 334 SW2d 54.

Passenger Train Discontinuance. The Missouri supreme court held that the commission had erred in denying a railroad permission to discontinue two passenger trains where the loss sustained by the trains was so patently disproportionate to the public convenience and necessity to be served by them as to render the order of continuance unreasonable and arbitrary. *Missouri ex rel. Chicago, R. I. & P. R. Co. v. Missouri Pub. Service Commission*, 335 SW2d 182.

Judgment on Condition. The Nebraska supreme court held that a commission or court ruling on the question of discontinuance of a railroad agency station at any given time does not amount to an adjudication for the future, since it is only a judgment on the condition presented by the application and relates only to the time and conditions presented. *Re Chicago, R. I. & P. R. Co.* 101 NW2d 448.

Successful Past Operation. The Nebraska supreme court held that successful operation under color of authority in the past creates a presumption that public convenience and necessity require a continuance of such operation so as to justify the commission's grant of a motor carrier certificate. *Re Preisendorf Transport*, 100 NW2d 865.

Finality of Order. The Nebraska supreme court held that the commission's action, in entering an order granting an application for a motor carrier certificate and overruling a motion for rehearing constituted final action so as to nullify and void a subsequent commission order reconsidering and denying the application. *Re Strasheim*, 101 NW2d 161.

Suspension Application. The Nebraska supreme court held that a certificate holder has a statutory right to file a complaint seeking suspension of its operating authority for one year and, if it does, is entitled to a hearing on its application, so that a commission order denying a suspension without hearing is invalid. *Re Ferguson Trucking Co.* 101 NW2d 444.

Change to Nonagency Status. The Pennsylvania superior court held that the commission erred in refusing to change the status of a railroad station from agency to nonagency passenger and freight on the face of evidence that the use of the station was diminishing and the slight inconvenience to the public that would result from the change was more than offset by the increased losses that would be suffered by the railroad if the change were not approved. *Reading Co. v. Pennsylvania Pub. Utility Commission*, 159 A2d 61.

5,000 KW Unit Placed in Service by Indiana & Michigan Electric Company

The world's largest electric power generating unit—capable of fulfilling electric requirements of more than a million average American homes—is now in commercial operation.

The giant 475,000-kilowatt turbine-generator at Indiana & Michigan Electric Company's single-unit Breed plant in Sullivan County, Ind., recently declared in commercial service Philip Sporn, president of the company and of its parent, American Electric Power Company.

Mr. Sporn also announced that the generating capacity of the new unit been revised upward to the new level of 475,000 kw from the original level of 450,000 kw. He explained the unit had undergone extensive tests and had been successfully operated at close to 500,000 kw. Based this performance, the revised rating was established.

The commercial operation of the unit—which is 40 per cent larger than next biggest turbine-generator in service—comes as the climax period of construction and testing that extended over a period of one-and-a-half years. Ground was broken for the power station in late 1960, and, in the ensuing months, construction workers moved well over a million cubic yards of earth at the site, raised 6,300 tons of structural steel, and poured 63,000 cubic yards of concrete.

The plant is located on the east bank of the Wabash river, about 20 miles southwest of Terre Haute. It is tied into the I. & M. and AEP power systems by a 186-mile, double-circuit 100,000-volt transmission line extending to a new substation west of South Bend. This new line increased to 1,000 circuit miles of 345,000-volt

transmission line extending throughout the seven-state AEP System.

Total cost of the plant, where only finishing touches remain to be performed, is estimated at \$71.5-million. This is exclusive of the various transmission switchyard, substation and line facilities required to interconnect and integrate the Breed plant with the balance of the I. & M. system and, in turn, with the rest of the AEP system.

Georgia Power Starts 500,000 KW Plant

GROUNDBREAKING ceremonies were held recently at the site of the Georgia Power Company's newly scheduled \$76,000,000 plant McDonough. John J. McDonough, power company president, for whom the 500,000-kilowatt plant will be named, turned the traditional first spadeful of earth.

Plant McDonough will be built near plant Atkinson, another steam-electric generating station, on the Chattahoochee river 12 miles north of Atlanta. Two 250,000-kilowatt generating units will produce electricity at the new plant. Generators of this capacity will be the most powerful ever to be used in a Georgia Power Company plant.

The first generating unit will be completed in the spring of 1963 and the second in the spring of 1964. The plant will be designed so that more units can be added when needed. It is estimated that construction work on the plant during 1960 will cost approximately \$750,000.

Literature On Condensate Scavenging Offered by Graver

THE use of condensate scavenging systems in high-pressure power plants is the subject of two new items of literature available from Graver Water Conditioning Co., New York, a

division of Union Tank Car Company.

Bulletin WC-128, entitled "High-Rate Condensate Scavenging for High-Pressure Central Stations," is a thorough examination of the use of condensate scavenging equipment. As examples of typical applications of condensate scavenging, the installations at Eddystone station (Philadelphia Electric Co.), Charles P. Crane station (Baltimore Gas & Electric Co.), and Little Gypsy station (Louisiana Power & Light Co.) are discussed.

Technical Reprint T-181, "What Condensate Scavenging Will Do at Little Gypsy Station," discusses the economies and increased efficiency which will result from the use of Graver condensate scavenging equipment at this power plant.

Copies of both the bulletin and reprint are available from Graver without obligation.

Westinghouse to Build World's Largest Power Transformer

A 600,000-kva power transformer, with 50 per cent more capacity than any transformer now in use, will be built by the Westinghouse Electric Corporation. The new unit will raise the generated voltage from 20,000 to 138,000 volts so that power may be transmitted economically to the load center.

Robert N. McCollum, manager of the power transformer department, Sharon, Pa., said the new unit will be the largest in the world. He explained that the largest transformer now in operation has a capacity of 400,000 kva and was built by Westinghouse.

The new transformer will weigh approximately 300 tons. It will be 24½ feet high, 26 feet long and 20 feet deep.

"This order gives dramatic emphasis
(Continued on page 20)

sis to the rapid developments in the power transformer field since 1950," Mr. McCollom declared. "It was only ten years ago that a 145,000-kva transformer Westinghouse built for Detroit Edison Company was the largest that could be built and shipped with facilities and materials then available."

Production is expected to begin in the latter part of 1961. The giant transformer will be delivered to a mid-west utility in June, 1962.

New International Cable Layer

INTERNATIONAL HARVESTER Company has announced the availability of a new International No. 2 Cable Layer for use by utilities, telephone companies, contractors and others desiring to bury cable, tubing or pipe.

This direct-connected, pivoted, cable layer, Harvester said, is available with a variety of hitch options to fit wheel or crawler tractors in common use in this application, including

the company's two-point Fast H or three-point hitches in categories 1½ and 2.

Designed for rugged use, the New Cable Layer can withstand severe loads placed on it in severe applications, the company stated. The standard is 1x8-inch heat-treated steel and the cable layer features a soiler. Its pivoting rear frame enables the operator to make tight turns as pointed out.

Featuring a quick detachable iron shoe which enables the operator to move cable or tubing without the necessity of cutting it, a roller equipped cable guide permits all types of cable, plastic tubing or copper water pipe to be laid free of damage.

Philadelphia Electric Files Permit for Atomic Power Plant

PHILADELPHIA Electric Company has filed with the United States Atomic Energy Commission its application for a construction permit to build an atomic power plant at Peach Bottom, York County, Pennsylvania, on the Susquehanna river, nine miles above Conowingo dam.

The plant, a high-temperature helium-cooled, graphite-moderated clear power station designed to produce 40,000 kilowatts of electricity, is scheduled for completion late in 1964.

Philadelphia Electric will construct and operate the plant under a contract with the Atomic Energy Commission.

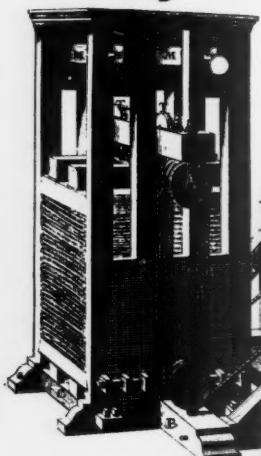
R. G. Rincliffe, president of Philadelphia Electric, said the filing of the application is a step in the regular procedure established by the AEC for approving the construction of nuclear power facilities.

"The Peach Bottom atomic power station, with its new reactor core, gives great promise of meeting the basic requirements for a truly major advance in reactor technology and economics," Mr. Rincliffe declared.

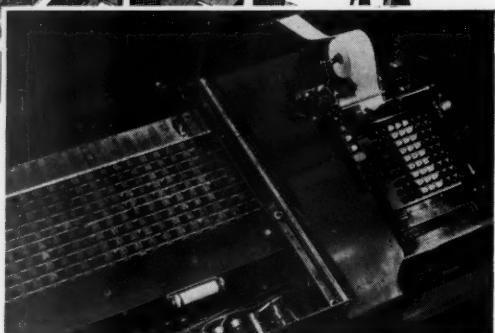
"The operation of this nuclear plant, as on the system of the Philadelphia Electric Company will mark a significant forward step toward the national goal of economic nuclear power competitive in cost with the kilowatts produced from conventional fuels."

The Peach Bottom project also is being supported by 52 investor-owned electric utilities throughout the country, which comprise a non-profit organization to promote the development of nuclear power, known as High Temperature Reactor Development Associates, Inc. (HTDA). Robert E. Ginna, chairman

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INDUSTRIAL PROGRESS—(Continued)

Fast H board of the Rochester (N. Y.) & Electric Corp., is president of RDA.

use, the reactor portion and the nuclear stand seem supply system of the plant are were being supplied by the General Atomic Co. The subdivision of General Dynamics Corporation. The engineer-constructor of Bechtel Corporation.

PUBLIC SERVICE CO. OF COLORADO UPS EXPANSION PLANS

PUBLIC Service Co. of Colorado revised its long-range construction plans after studies of population trends, area development and customer usage and expects to spend \$2 million from 1960 through 1964. Its construction budget for the five years was \$157 million, according to Robert T. Person, president. The revised 1960 construction program calls for spending some \$37.5 million, up from \$31.8 million last

GE SHIPS POWER TRANSFORMERS WITH LARGEST BUSHING-MOUNTED LOAD TAP CHANGERS

temperatures—moderated—featuring the largest bushing-mounted load tap changers (LTC) General Electric has ever supplied—late in 1959. They will be shipped to the Public Service Electric and Gas Company of Newark, New Jersey.

According to Mr. G. A. Hoyt, manager of the company's Transformer Department at Westfield, Mass., this kind of LTC differs from the conventional type because the contactors are located on top of the common, low voltage bushings instead of in a separate compartment on the end of the transformer.

This arrangement, Mr. Hoyt said, truly minimizes the need for a series transformer and permits smaller dimensions in nuclear plants, as much as ten per cent lighter than Philadelphia Electric, and up to 15 per cent lower than significant national generators. These units, Hoyt stressed, are ideal for power company transformers—particularly in watts transmission-tie applications.

Public Service is installing two of these units near Trenton, and one each in Elizabeth and North Brunswick, N. J. Two more units are on order. The transformers, weighing over 200 tons apiece, are rated at 2000 kva, 230,000 volts and will feed the utility's new 230 kv transmission into the existing 138 kv system.

GUST 18,

1960

21

JULY 18, 1960

PUBLIC UTILITIES FORTNIGHTLY

MAJOR NEW BUILDING WIRE DEVELOPMENT BY TRIANGLE CONDUIT & CABLE

AN important advance in the building wire field was announced recently by Triangle Conduit & Cable Co., Inc., New Brunswick, N. J. According to the announcement, the new wire, called Thermo-Triex, is a non-metallic sheathed cable utilizing for the first time a plastic outer covering. The individual conductors will continue to be insulated with a polyvinyl-chloride compound and color coded according to industry practice.

Advantages over the braided type non-metallic sheathed cable are said to include elimination of flaking, greater flexibility, easier pulling and stripping, increased resistance to abrasion, flame and moisture. In addition to being cleaner to handle, the above advantages should result in savings both in time and labor.

The company announced that Triangle Thermo-Triex will replace its current line of braided non-metallic sheathed cable beginning immediately.

ALUMINUM TOWERS PLACED IN SERVICE BY COMMONWEALTH ED.

COMMONWEALTH Edison Company, Chicago, has placed in service an electric power transmission line utilizing 44 towers fabricated from aluminum.

The section of aluminum towers runs for about six miles in suburban Chicago, from Tiedtville to Hodgkins, Illinois. The towers are part of a 50-mile, 138 KV link between Edison's new Dresden nuclear power station and its McCook substation. The line is parallel to, and near the Illinois-Michigan Canal.

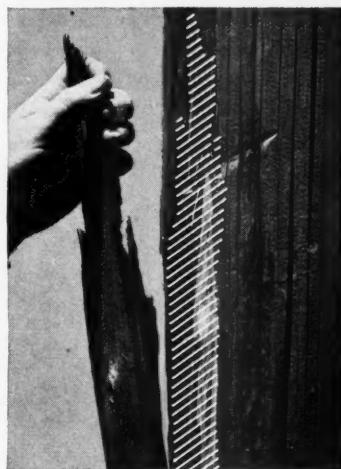
Designed and fabricated by Aluminum Company of America, the aluminum towers were erected early in the year. Installation of the aluminum structures followed full-scale tower tests, which determined that the aluminum designs met service requirements for the line.

Use of aluminum towers by Commonwealth Edison, one of the nation's largest utilities, is part of the company's continuing program to investigate new materials and methods of generating and distributing electric power.

The line was built to provide a comparison of the relative costs of erecting and maintaining aluminum

(Continued on page 22)

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INDUSTRIAL PROGRESS—(Continued)

towers, in contrast to conventional steel towers. Maintenance savings are anticipated because the aluminum structures are not expected to require painting.

Combustion Engineering Moves General Offices to Conn.

THE general offices of Combustion Engineering, Inc., which have been located in New York for more than 45 years, (35 years in the Combustion Engineering Building at 200 Madison avenue) have been transferred to Windsor, Conn., 125 miles away.

The move was necessitated by the continuing growth of Combustion which made it essential to plan for larger and more functional offices with greater floor areas than were available at its New York location.

Certain officials and the New York District Sales, Export, Marine Sales and Service, and Publicity Departments will remain at 200 Madison avenue in New York where the company is retaining four of the thirteen floors it previously occupied.

The mailing address at the new corporate general offices is: Combustion Engineering, Inc., Windsor, Conn. and the telephone number is: Murdock 8-1911, long distance area code 203.

PG&E Plans \$62,197,000 Power Expansion

THREE power project applications, representing expenditures totaling \$62,197,000 have been filed by Pacific Gas and Electric Company with the California Public Utilities Commission, PG&E vice president and general manager S. L. Sibley announced recently.

The three projects, scheduled for completion in late 1962 or early 1963, involve the replacement of two old hydroelectric powerhouses and the addition of a large third unit to a steam plant.

The projects include:

DeSabla powerhouse: Replace the 57-year-old, four-unit, 13,000-kilowatt hydroelectric plant on Butte Creek near Chico with a single-unit, 18,500-kw turbine-generator; replace two penstocks with a single penstock about 6,500 feet long; replace intake facilities and improve spillways.

Stanislaus powerhouse: Replace the 52-year-old, four-unit, 40,000-kw hy-

droelectric plant on the Stanislaus river north of Sonora with a single 82,000-kw turbine generator; replace existing steel and wood stave stocks with a single steel penstock 4,350 feet long; improve the foundations and related facilities; provide a 110,000-volt transmission circuit to Melones Junction; construct an auxiliary dam to regulate downstream flow.

Morro Bay power plant: Build a 325,000-kw cross-compound steam electric generating unit to virtually double the plant's present capacity of 330,000-kw in two existing units. The new unit will have twin generators operating at 3,600 revolutions per minute with a single boiler producing 160,000 pounds of steam per hour at 1050 degrees F. with a throttle pressure of 2400 pounds per square inch. A new 220,000-volt transmission will be strung from the plant, on San Luis Obispo county coast, to PG&E's interconnected 220,000-volt network in the San Joaquin valley.

Three other electric generating projects, representing \$95,000,000, are under way in the PG&E system. They are the two-unit steam-electric expansion at Pittsburg power plant, geothermal plant at The Geysers, and the Kings river hydroelectric plant.

Minnesota Pwr. & Lt. Dedication Clay Boswell Station

MINNESOTA Power & Light Company's newest generating plant, \$25,000,000 Clay Boswell Steam Electric Station, was dedicated recently in ceremonies attended by area citizens and industrial leaders.

The new plant with its two generating units each of 70,000 kilowatts capability raises the total generating capability of the company and its subsidiary, Superior Water, Light and Power Company, to 483,000 kilowatts.

Largest on the company system which includes four steam electric stations and 10 hydroelectric stations, the new plant is part of MP&L's continuing program of expansion and modernization. Since World War II, the program has required an investment of more than \$90,000,000. An expansion investment of \$100,000,000 has been projected for the next decade.

Kentucky Power to Build 265,000-KW Plant

GROUND was broken in Louisa, Kentucky, recently for Kentuck

INDUSTRIAL PROGRESS—(Continued)

Stanislaus River Company's \$39 million, 265,000-kilowatt Big Sandy plant on the banks of the river of the same name. It is located at the boundary between Kentucky and West Virginia. This new power plant is expected to burn 750,000 to 800,000 tons of Kentucky coal a year.

An outstanding feature of the new plant will be its use of a giant cooling tower—the first of its kind in the Western Hemisphere. The tower will be of concrete construction, of parabolic shape, and will rise 320 feet above the ground, with a base diameter of 245 feet tapering to 140 feet at the top. Its purpose will be to provide the tremendous amounts of water required to condense the plant's steam.

While breaking ground for the 265,000-kw plant, Philip Sporn, president of Kentucky Power and its parent, American Electric Power, revealed that a third 475,000-kw unit will be built by 1963 "somewhere on the American Electric System." Just recently, the first generating unit of this size was placed in commercial operation at the AEP System's new Breed plant in Indiana, and a second unit is scheduled for operation later this year at its Philip Sporn plant in West Virginia.

All told, Mr. Sporn said, the AEP System will install a total of 2,400,000 kw of generating capacity during the period 1960-63, a figure equal to the total System capability as recently as 1950.

Rust to Construct 320-foot Chimney in Cleveland

A 320 ft. reinforced concrete chimney will be constructed by The Rust Engineering Company at the Lake Shore plant of the Cleveland Electric Illuminating Company, Cleveland, Ohio.

Construction will start in August and is expected to rise about 8 feet per working day. The Rust chimney will taper to 20 ft. 6 in. outside diameter at the top. An independent lining of acid-proof brick will also be built—in effect, a chimney within a chimney.

The 320 ft. chimney will be equivalent in height to an average 25-story office building.

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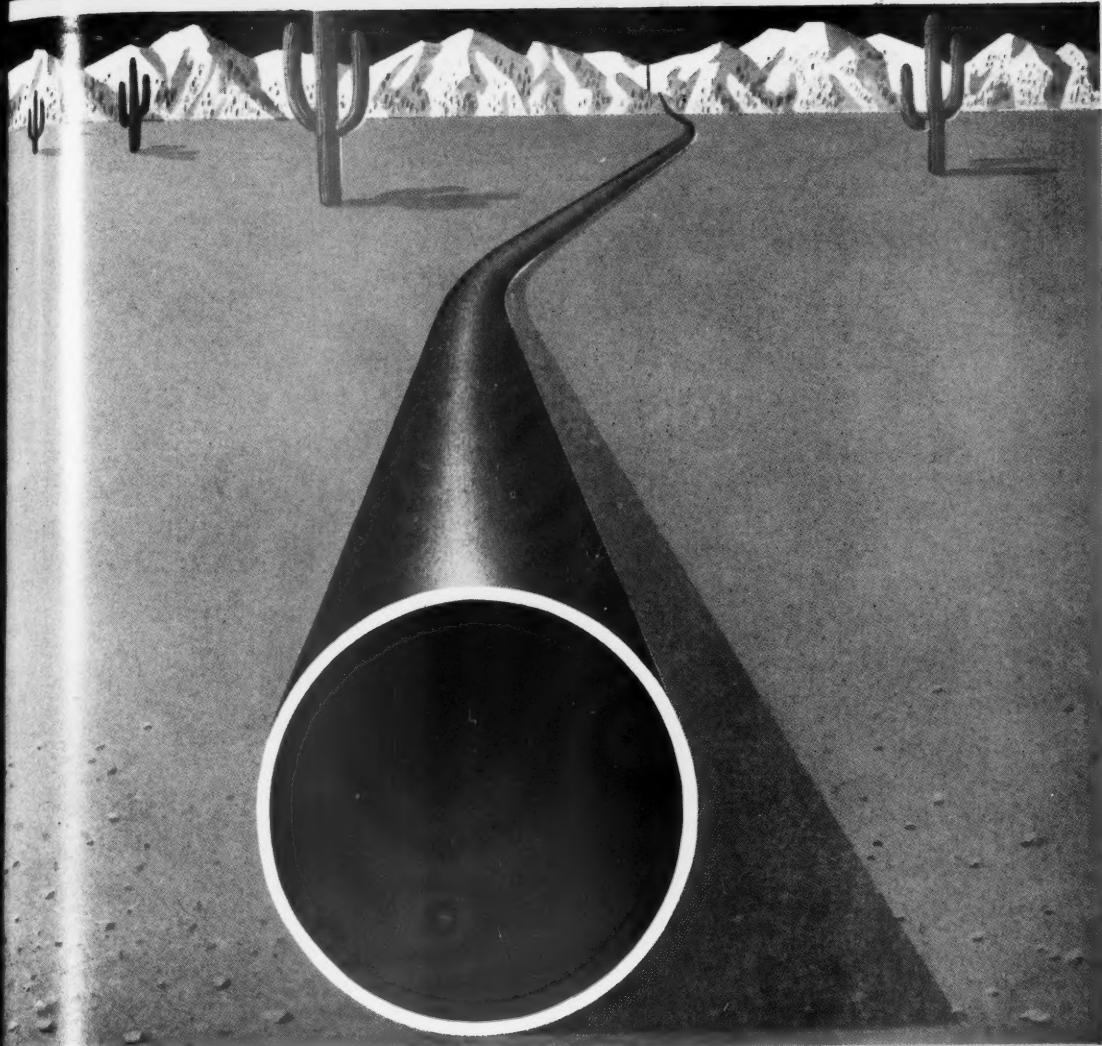
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